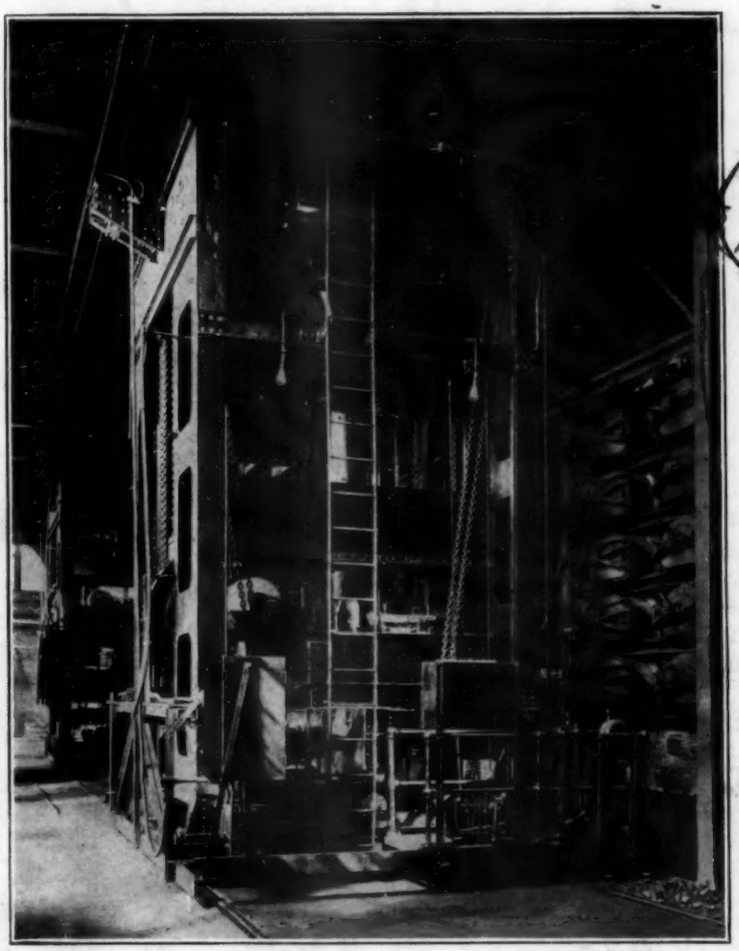
AMERICAN
GAS JOURNAL
Established 1859 *Pioneer of the Gas Industry*

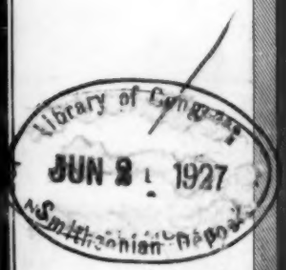
VOL. 186 No. 22.
WHOLE No. 3894.

NEW YORK, SATURDAY, MAY 28, 1927

Subscription, $3 Per Year
$4 Canada $5 Foreign

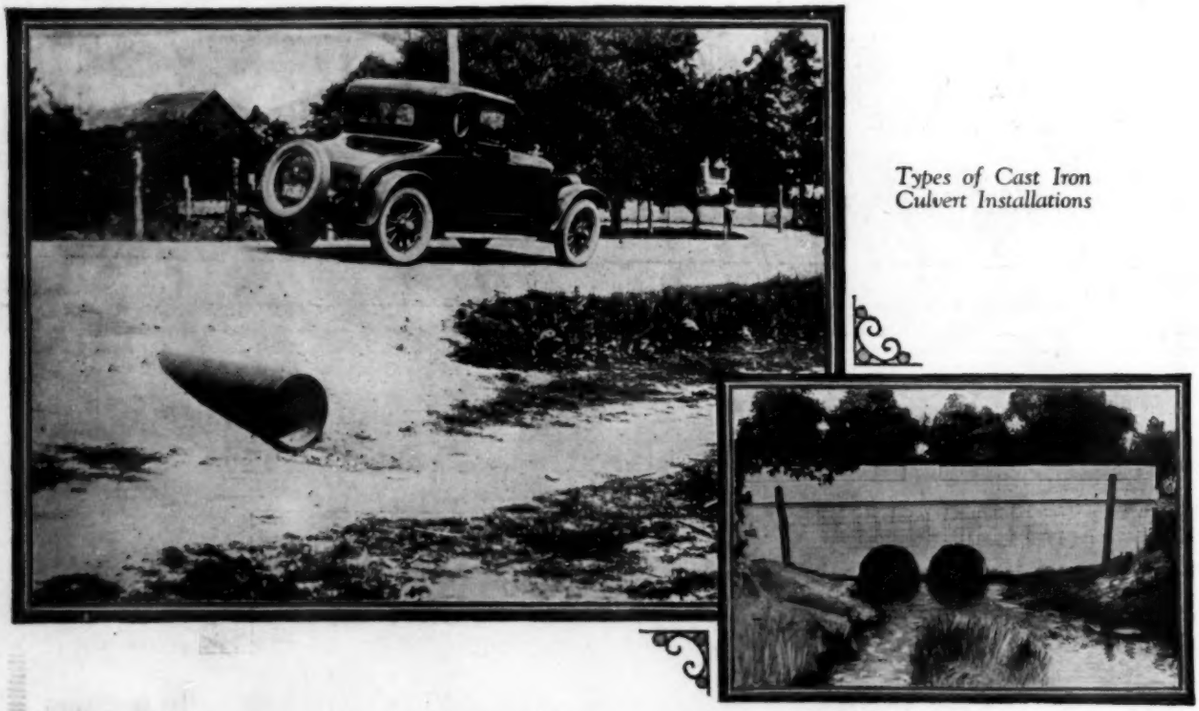
DE BROUWER COMBINED CHARGING AND DISCHARGING MACHINE





The BARTLETT HAYWARD CO.
Engineers and Founders
BALTIMORE NEW YORK

Advertising Index, page 39 Index to Contents, page 4



Types of Cast Iron Culvert Installations

Use deLavaud Centrifugally Cast Culverts for Permanence . . . and Economy

THE great compressive strength of deLavaud cast iron culverts is an important point where a heavy fill exists.

Their light weight makes them easy to handle and install—the smooth interior surface produced by the deLavaud centrifugal method of casting gives them an increased run-off capacity.

Many construction engineers specify cast iron culverts on account of their high resistance to corrosion. Their strength results in permanence and the elimination of maintenance costs.

Write for full details

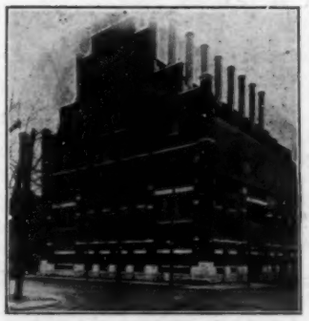
United States Cast Iron Pipe and Foundry Company

General Offices:
Burlington, New Jersey

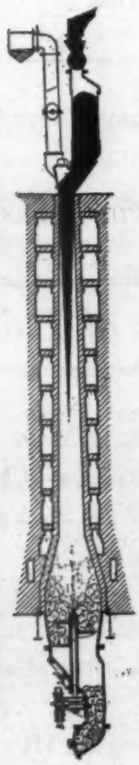
SALES OFFICES

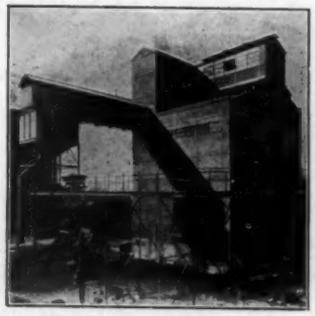
Philadelphia: 1421 Chestnut St.
Chicago: 122 So. Michigan Blvd.
Birmingham: 1st Ave. & 20th St.
Buffalo: 957 East Ferry Street
Cleveland: 1150 East 26th Street
New York: 71 Broadway
San Francisco: 3rd & Market Sts.
Pittsburgh: 6th & Smithfield Sts.
Dallas: Akard & Commerce Sts.
Kansas City: 13th & Locust Sts.
Minneapolis: 6th St. & Hennepin Ave.

GLOVER-WEST
Vertical Retorts

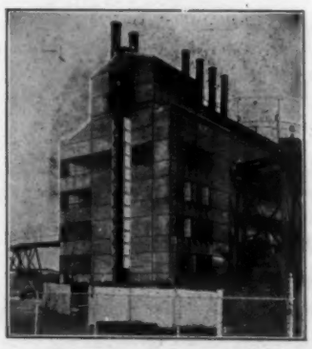


Toronto, Ont.
5,000,000 cu. ft. per day





Fargo, N. D.
800,000 cu. ft. per day



Portland, Me., 2nd Plant
750,000 cu. ft. per day

Fall River, Mass.
1,600,000 cu. ft. per day

Plants *Completed* in 1926

Also Completed—Stamford, Conn., 1,100,000 cu ft.; Buenos Aires, 3,500,000 cu. ft.

Under Construction

Springfield, Mass.	2,800,000 cu. ft.	Santiago, Chile	3,000,000 cu. ft.
Toronto, Ont.	600,000 cu. ft.	Pawtucket, R. I.	1,060,000 cu. ft.
		Faribault, Minn.	400,000 cu. ft.

WEST GAS IMPROVEMENT CO.

Builders of Coal Gas Plants

441 Lexington Ave. New York.

American Gas Journal

SIXTY-SEVENTH YEAR

Published Weekly by American Gas Light Journal, Inc., 53 Park Place, New York, N. Y.
S. G. KRAKE, Pres. and Treas. A. M. GLEASON, Sec'y

STANTON G. KRAKE, Managing Editor HENRY M. RILEY, Editor
Ismar Ginsberg, Associate Editor

"MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS"

Contents of This Issue

House Heating With Gas—R. E. Sivley 527
Unique Plan for Training Salesmen—J. H. Reed..... 531
Selling—to Secure More Gas per Sales per Residential Customer
—to Build Load—W. E. Derwent 532
The Water Heating Load—E. W. Pratt 536
The Industrial Heating Problem—S. L. Drumm..... 537
Window Display Advertising—Ray Martin 538
As the Journal Views It..... 539
Industrial Gas Lesson—Lesson No. 171 540
Does the Clock Thermostat Save Fuel?..... 541
Home Service 542
When the Last Payment Is Made—Frank H. Williams..... 544
Progress in Gas Technology..... 545
News of the Gas Industry..... 547

Subscription $3.00 per year, including postage, in the United States, Mexico, Cuba, Porto Rico, Hawaii or the Philippines; in Canada, $4.00; foreign, $5.00—Single Copies, 10 cents.

AMERICAN GAS JOURNAL, MAY 28, 1927. Vol. 126. No. 22.
Published weekly by American Gas Light Journal, Inc., New York, N. Y.
Entered as second-class matter Jan. 9, 1917, at the post-office at New York, N. Y., under the Act of March 3, 1879.

AMERICAN
GAS JOURNAL
Established 1859— Pioneer of the Gas Industry

Vol. 126. No. 22 NEW YORK, MAY 28, 1927 Whole No. 3634

House Heating With Gas*

The problem is not identical with each community

R. E. Sivley

Commercial Mgr., San Antonio Public Service Co.

THE problem of enclosed heating through the combustion of gas has demanded and is receiving a large share of study and attention from the distributors of gas for domestic and commercial purposes. The heating of large commercial and public buildings by means of gas has several well-defined governing factors, and, while each separate case usually presents its own problems, these governing factors make such problems relatively easy of solution compared to the general heating of residence buildings.

The gas heating business then may be readily divided into two classes, commercial or industrial and domestic, and it is with the latter class that this discussion will deal.

The foundation of all public utility business is laid upon the constantly changing habits and requirements of the people. It is not necessary to compare the conveniences of the modern household with the inconveniences of the time when the members of the household brought their water from the spring, lighted their rooms with pine knots and candles, and carried wood from the forests to cook their meals and warm their homes to show that the habits and requirements of our people are changing every day. It is very necessary, however, that the service and methods of all public utilities must be constantly watched and adjusted to meet these changed conditions.

Progress in Use of Gas Has Been Slow and Tedious

When manufactured gas was first used for illuminating purposes, very few people even dreamed that at some future date the same product would be a standard and economic means of cooking food. With the limited processes of manufacture and distribution it was a long and tedious program of development up to the present day of so many practical and almost indispensable uses.

If we had not long since become used to having unexpected and seemingly impossible things happen, we might feel that we have about reached the limit of successful application of gas to household uses. A study of the conditions in any given locality might indicate that the heavy demands and low load factor of house heating loads in that locality would make the heating load an unprofitable and altogether undesirable one. The same was no doubt true before gas was used for cooking, but improved methods of distribution, together with the development of other gas-burning household devices, has made the domestic load the principal and supporting branch of the industry.

Encouraging Progress

So we find ourselves today looking backward upon a work performed well, if not entirely completed, and forward to another work upon which successful and encouraging progress has already been made.

The distribution of gas at greatly increased pressures will enable us to readily serve classes of business that may now be unprofitable because of the heavy investment required to serve them. Recent developments in the delivery of gas at higher pressures are very encouraging and there is no doubt that as we continue to build up our loads the greater demands will be met without proportionate increases in distribution costs.

The relation of the load factor of house heating to temperature, which in turn means the relation to general climatic conditions and geographic location, is a very important factor to be considered, and this relation affords a ready means of analyzing and predicting house heating loads. In general, the farther north we go the better the load factor to be obtained.

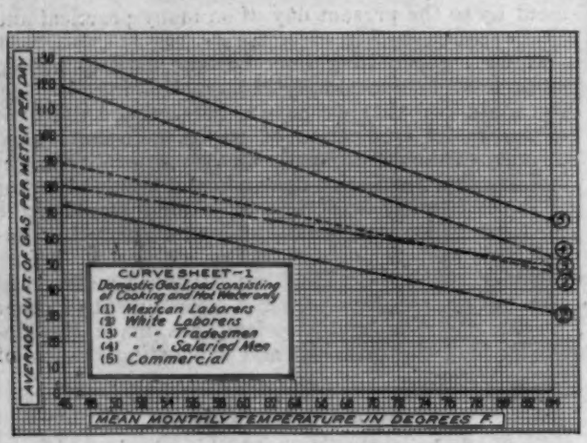
The house heating season in the northern states is practically continuous over a period of six to seven months, while we of the Southwest have widely vary-

*Read before Southwestern Public Service Assn. Convention, New Orleans, La., April 26-29, 1927.

ing requirements for a period of four or five months, and some of us have only three to four months of intermittent load to consider. Then, if the desirability of house heating load be based on the load factor of that business alone, the gas companies of our division have a very much less attractive proposition to work on than those farther north.

The average American in the northern sections has long since recognized the necessity for appropriating a certain fixed part of his income for house heating purposes, and he appreciates the need of a type of home construction that will protect him from a continued severe winter The man in Texas or Louisiana uses a cheaper type of home construction and his house heating requirements may vary considerably from week to week during the winter period, and the winter period itself may vary from year to year.

This variation is of course not desirable, but it can be used to good advantage by the gas companies, because of the ease of control of gas and consequent reduction in waste under varying conditions.

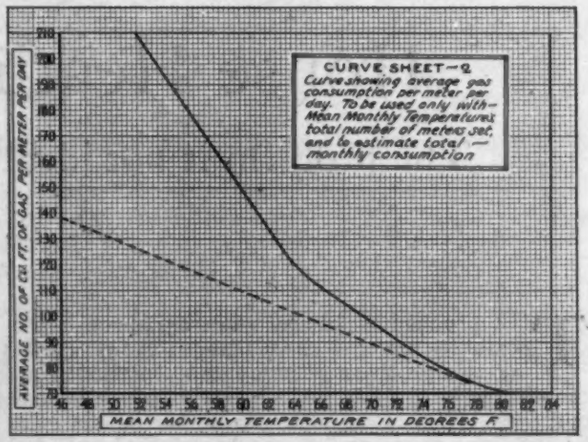

AVERAGE CU. FT. OF GAS PER METER PER DAY
CURVE SHEET—1
Domestic Gas Load consisting of Cooking and Hot Water only
(1) Mexican Laborers
(2) White Laborers
(3) " " Tradesmen
(4) " " Salaried Men
(5) Commercial
MEAN MONTHLY TEMPERATURE IN DEGREES F.

Extensive Commercial Applications Will Assist

This again brings us back to the question of load factor, which is the important effect of the heating business from the standpoint of the gas company. To offset the requirements of the heating load we already have important and encouraging developments in household refrigeration by means of gas and indications of the possibility of extensive commercial applications.

If the electric companies had hesitated and handled their business according to the requirements of the domestic load alone, they would never have enjoyed the fine state of development that they have reached today. Instead of hesitating they accepted the domestic load as rapidly as they could take care of it and went to work in other fields to develop uses and requirements that would give them a better balanced load. Their success in this work has been such that they are today coming back to the domestic customer with inducements to secure his cooking and water heating business.

General climatic conditions have their effect upon the user as well as the supplier of gas for heating purposes. The effect on the user has established a condition involving the human element, but this condition can be met through the thorough co-operation of the gas companies, who are now beginning to be recognized as having a generous portion of human consideration in their make-up.


AVERAGE NO. OF CU. FT. OF GAS PER METER PER DAY
CURVE SHEET—2
Curve showing average gas consumption per meter per day. To be used only with—Mean Monthly Temperatures, total number of meters set, and to estimate total monthly consumption
MEAN MONTHLY TEMPERATURE IN DEGREES F.

The general tendency of the American people toward habits of luxury and ease, together with the rapidly changing status of the female members of the family, provides an excellent opportunity for the introduction into the home of any serviceable equipment requiring little or no attention from the user. From a sales standpoint then the household with frequently changing heating requirements offers a considerable advantage to the distributor of gas.

Difficult to Reconcile All Ideas on the Subject

It is not possible to offer at one time a solution to all of the problems of house heating, nor is it possible to present data and arguments that will bring all parties concerned to one opinion in the matter. Some of our most prominent executives insist that now is the time and that we should go after the heating business with all of our ability, while others are awaiting further developments, and some feel that it would be nothing short of suicidal to attempt to handle the business on a large scale.

The very least we can do in the matter is for each of us to make a careful study of our own local conditions to find out definitely what we are doing now, just how we would go about handling the business if it comes to us, and whether we can in any way justify going after it.

The tabulations and load curves given in the following pages are not intended as a proof of the effect of the house heating load upon the business of selling gas, but rather as a suggested means of studying each local condition.

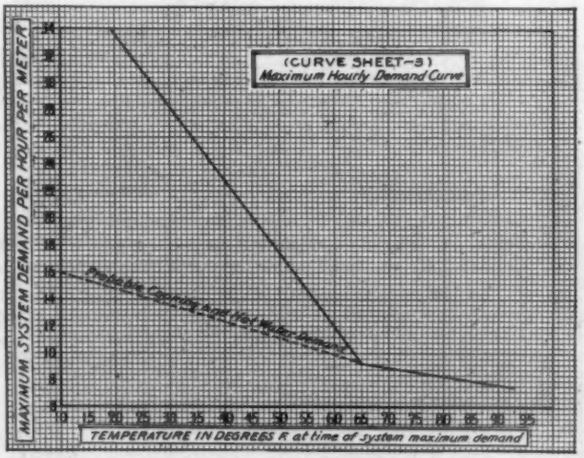
The data used is taken from the records of a com-

pany operating in a city of 200,000 population, and the mean temperatures given in Table I show that the winter periods are of short duration and that no extreme temperatures are reached.

TABLE I

Mean temperature for the month ending—

	Reading date—					
	3rd	9th	16th	18th	22nd	25th
Jan.	48	46.4	45.8	46.7	48.2	47.0
Feb.	51	53.6	56.6	56.9	56.6	59.7
Mar.	61	61.1	58.9	59.0	60.0	60.6
April	58.6	59.7	61.3	61.6	61.7	62.0
May	66.5	68.3	70.5	71.3	71.5	72.0
June	74.9	75.8	78.4	79.1	80.7	81.1
July	81.6	82.4	82.5	82.1	81.3	81.6
Aug.	82.7	83.0	83.6	83.9	85.0	85.4
Sept.	84.2	83.8	83.6	83.3	82.9	82.9
Oct.	82.5	81.3	80.7	80.3	78.9	77.1
Nov.	73.3	69.8	64.8	63.5	61.1	60.0
Dec.	60.2	61.1	58.9	58.0	58.7	58.7

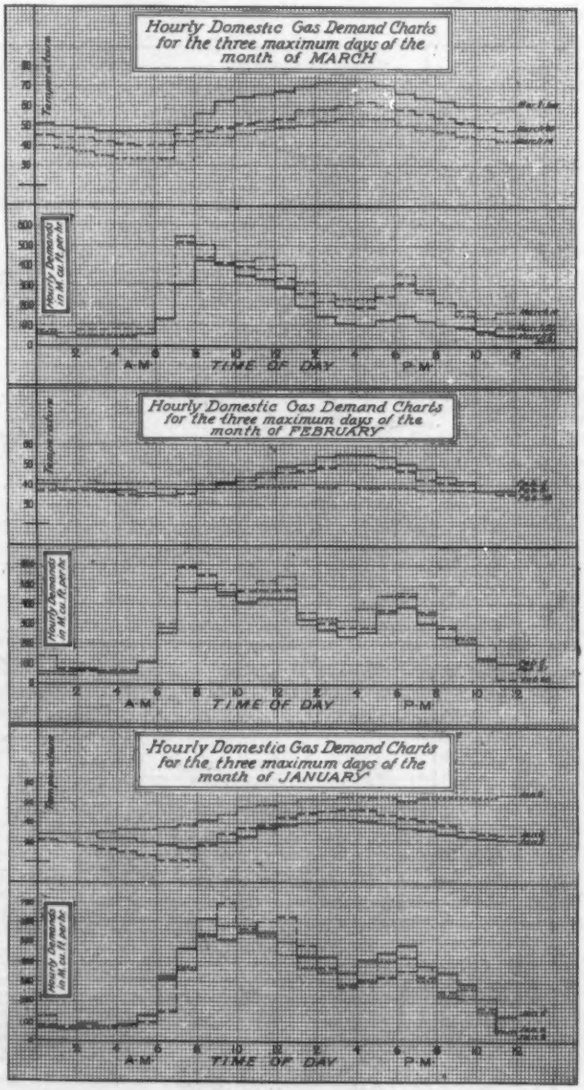

(CURVE SHEET-3)
Maximum Hourly Demand Curve
MAXIMUM SYSTEM DEMAND PER HOUR PER METER
TEMPERATURE IN DEGREES F at time of system maximum demand

In order to obtain accurate information concerning the different uses of gas in the home a detailed survey was made of about 18,000 homes, and every gas burning appliance used was recorded, together with the size and type of construction of the home, the size of the family, etc. By reference to the records of the customers' accounts the amount of gas supplied to any particular group or class of customers was readily obtained.

Effect of Temperature on Amount of Gas Used

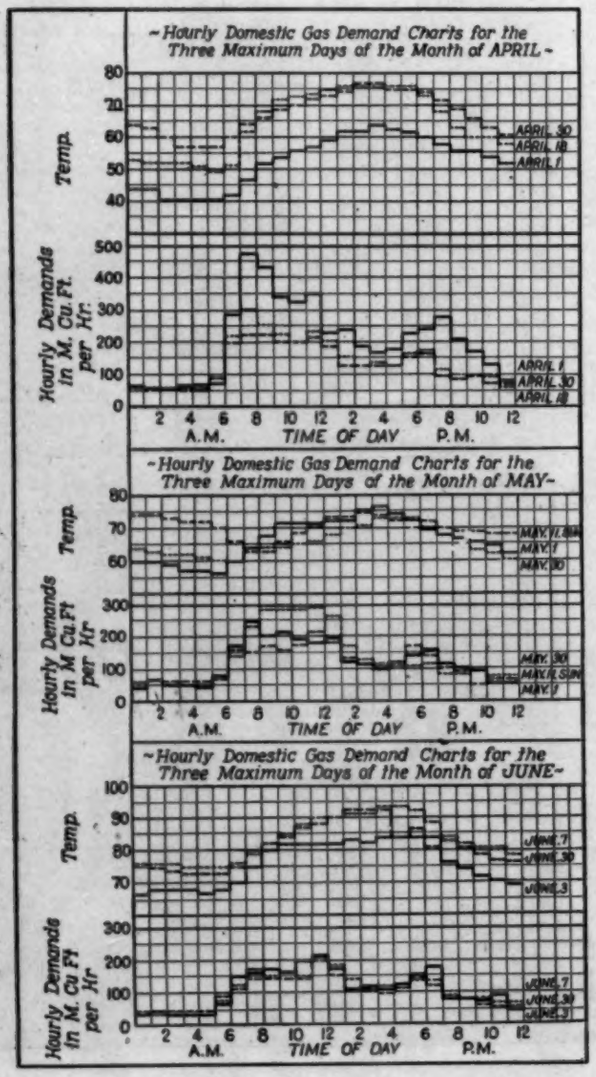
The curves on Sheet No. 1 show the effect of temperature on the amount of gas used per day for strictly cooking and water heating purposes. Each of the five curves represents a particular group or class of customers and the gas consumption indicated is based on the daily average over a period of a year.

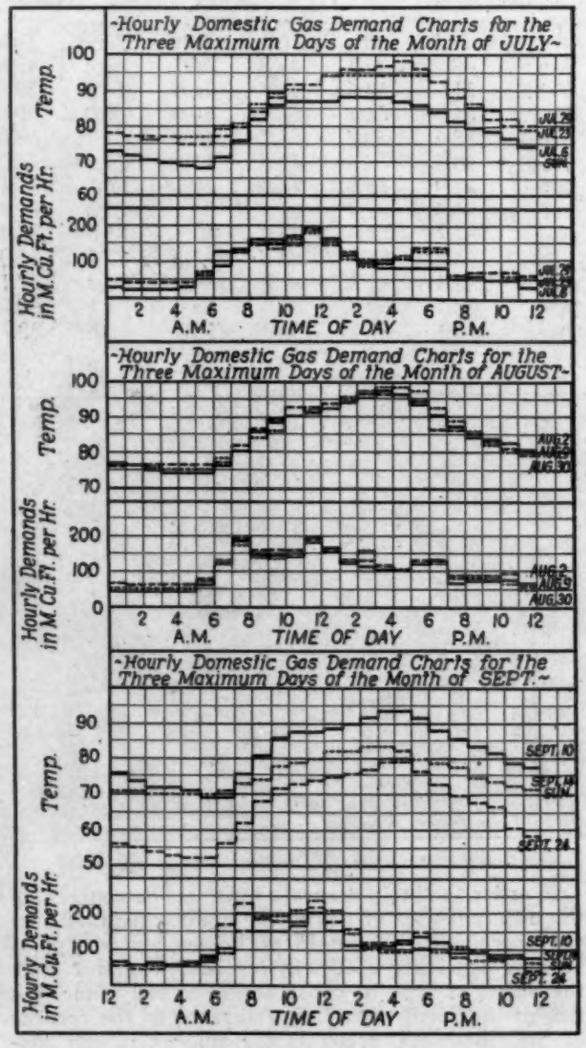
It is interesting to note the difference in the average daily requirements of the different groups and the increase in average daily requirements with the decrease in mean monthly temperature. It is possible that the actual use of gas for house heating begins at this point by reason of the common use of range ovens for warming the kitchens.


Hourly Domestic Gas Demand Charts for the three maximum days of the month of MARCH
Hourly Domestic Gas Demand Charts for the three maximum days of the month of FEBRUARY
Hourly Domestic Gas Demand Charts for the three maximum days of the month of JANUARY
TIME OF DAY
A.M.
P.M.

The curves on Sheet No. 2 represent the system as a whole, including all gas used for house heating and small commercial business, but excluding the industrial load. It will be noted that the curve representing the total system cooking and water heating load indicates a somewhat higher average consumption of gas per meter per day than the curves on Sheet No. 1. This is true for the reason that the groups selected for the first curves are known to have no heating appliances whatever and, therefore, do not represent the requirements of the average domestic customer. The curve was obtained by applying to the average customer the same per cent

of increase in consumption with decrease in temperature as was found to exist in the groups considered on Sheet No. 1.


~Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of APRIL~
Temp.
Hourly Demands in M. Cu. Ft. per Hr.
APRIL 30
APRIL 18
APRIL 1
APRIL 1
APRIL 30
APRIL 18
2 4 6 8 10 12 2 4 6 8 10 12
A.M. TIME OF DAY P.M.
~Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of MAY~
Temp.
Hourly Demands in M. Cu. Ft. per Hr.
MAY 30
MAY 1
MAY 30
MAY 1
2 4 6 8 10 12 2 4 6 8 10 12
A.M. TIME OF DAY P.M.
~Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of JUNE~
Temp.
Hourly Demands in M. Cu. Ft. per Hr.
JUNE 7
JUNE 30
JUNE 3
JUNE 7
JUNE 30
2 4 6 8 10 12 2 4 6 8 10 12
A.M. TIME OF DAY P.M.


~Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of JULY~
Temp.
Hourly Demands in M. Cu. Ft. per Hr.
JULY 23
JULY 6
JULY 23
JULY 6
2 4 6 8 10 12 2 4 6 8 10 12
A.M. TIME OF DAY P.M.
~Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of AUGUST~
Temp.
Hourly Demands in M. Cu. Ft. per Hr.
AUG. 30
AUG. 2
AUG. 30
2 4 6 8 10 12 2 4 6 8 10 12
A.M. TIME OF DAY P.M.
~Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of SEPT.~
Temp.
Hourly Demands in M. Cu. Ft. per Hr.
SEPT. 10
SEPT. 24
SEPT. 10
SEPT. 24
12 2 4 6 8 10 12 2 4 6 8 10 12
A.M. TIME OF DAY P.M.

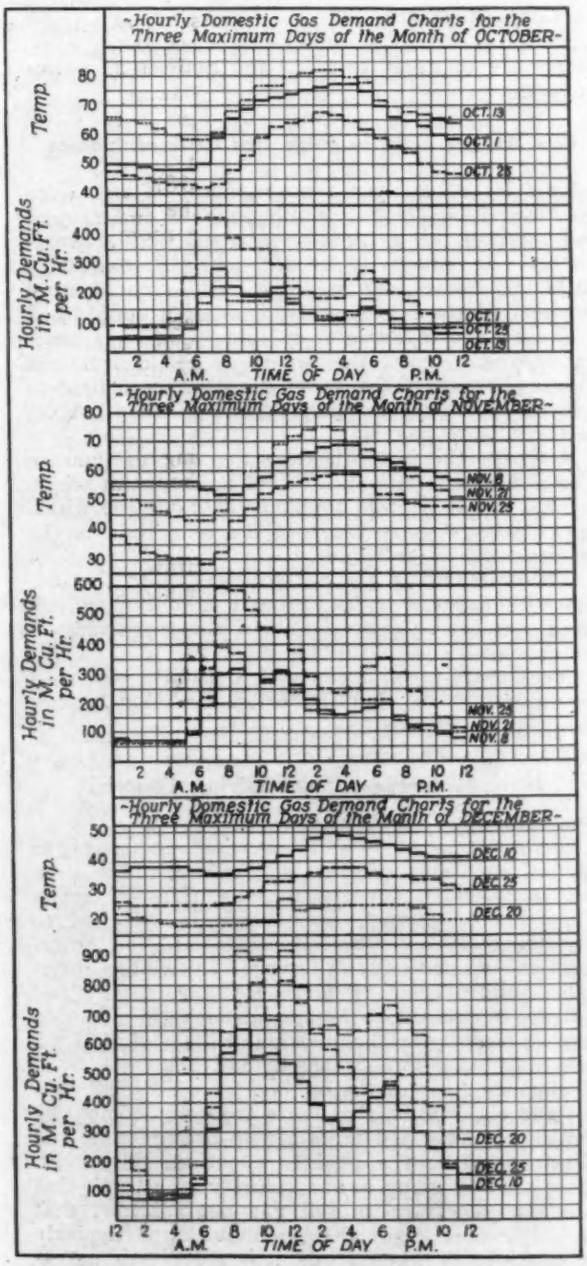
The solid line curve on Sheet No. 2 represents a four year average of the total system output, exclusive of industrial business and losses. The ordinate between the two curves on this sheet represents the gas used for heating purposes and in this case the entire consumption for heating was by means of small space heaters, there being no central heating plants on the lines during the period involved.

Hourly Demand Charts

The effect of temperature on the domestic demand is definitely indicated on the twelve hourly demand charts shown. These charts were made from records of the system just after the introduction of natural gas, but before the addition of any industrial load. The three maximum system demand days are taken for each month, and the records of temperature from the U. S. Weather Bureau were used. The charts for May, June, July, August and September show the maximum system demand to occur at 11 a. m., while the maximum demand for the other seven months in the year occurs at 7 a. m.

From these twelve charts the maximum demand per hour per meter was established, and the composite curve shown on Sheet No. 3 was drawn. This curve shows the very decided effect of the heating load on the system demand at temperatures below 65 degrees and also indicates that the average demand per meter at the lowest temperature is well within the capacity of any well-designed distribu-

tion system. This average demand per meter, however, cannot be taken as a basis for calculating a fully saturated heating load, since only a relatively small number of heating customers is considered in the average.


-Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of OCTOBER-
Temp.
Hourly Demands in M. Cu. Ft. per Hr.
OCT. 13
OCT. 1
OCT. 25
OCT. 1
OCT. 25
OCT. 13
2 4 6 8 10 12 2 4 6 8 10 12
A.M. TIME OF DAY P.M.
-Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of NOVEMBER-
NOV. 8
NOV. 21
NOV. 25
NOV. 25
NOV. 21
NOV. 8
-Hourly Domestic Gas Demand Charts for the Three Maximum Days of the Month of DECEMBER-
DEC. 10
DEC. 25
DEC. 20
DEC. 20
DEC. 25
DEC. 10
12 2 4 6 8 10 12 2 4 6 8 10 12
A.M. TIME OF DAY P.M.

In arriving at heating load demands and actual load conditions on the system, it will be necessary to consider different parts of the system and different groups of customers separately, as was done in establishing the sales per meter as shown on Curve Sheet No. 1. There is no doubt that the time and money spent in obtaining section load charts and collecting and keeping up to date the individual household appliance records will be more than justified by the insight gained into the business.

From information obtained in this way one large company has recently set up limitations on the amount of heating business that can be carried per block in different parts of the city, and has set out to build the load up to the limits as promptly as possible.

UNIQUE PLAN FOR TRAINING SALESMEN

J. H. Reed

A unique plan for training salesmen has been developed by the sales department of the Georgia Power Company at Atlanta, which might be successfully used by many firms selling gas appliances.

Each Monday morning the manager of the sales department selects some salesman and gives him an electrical or gas appliance to study during the week. In that time he is supposed to find out who invented the appliance and when; how it has been improved; what it is made of; how it is made; how it is used, and what advantages it possesses for the housewife.

On the following Monday morning a sales meeting of the entire force is held, and the salesman is given thirty minutes in which to tell of the information he has gathered about the particular appliance.

Each Salesman Put on the "Grill"

Then the manager selects another salesman and another appliance, and the performance is repeated until every salesman in the department has made a week's study of every appliance. Needless to say, with new salesmen and new appliances continually coming in, the course is never completed, and continues to be interesting, week after week.

The manager, of course, keeps a careful record, so that he never calls upon the same man twice to study the same appliances, and occasionally he helps the men find information, but otherwise the course practically runs itself for the company.

But the advantages are many. In the first place, each salesman gradually becomes an expert as regards the stock on hand. In making his talks to the other salesmen, he learns how to bring out his "selling" points. In listening to him, the other salesmen learn something about the stock. And last, but not least, the system results in better sales for the department, since it is impossible for salesmen to know their stock thoroughly without selling more of it.

It is a plan that can be successfully worked in any gas appliance department and one that will bring about two important things—a more thorough knowledge of the stock and more sales per man employed.

Selling*

To secure more gas sales per residential customer---to build load

W. E. Derwent

Vice-President, Geo. D. Roper Corp., Rockford, Ill.

YOUR committee has handed me a big subject with which the entire period of time occupied by this convention might be profitably spent, and we would still have much to discuss even then. The question of increased sales, improved sales methods, is a vital one and from my viewpoint is today the real heart of our business. It will be impossible for me to tell you how to do a real job of selling, and I wouldn't assume that I have the ability to do this. I have some thoughts in mind, however, which I want to pass along and which I hope will give you something.

First, as a manufacturers' representative I am going to take advantage of this opportunity to quote some figures furnished by the Department of Commerce at Washington, D. C., concerning the volume of business done in 1925—the last year figures are available for—to give us something of a background to think about after we leave here, as these figures have a bearing on the subject assigned to me.

Half a Billion Spent in 1925

According to the Department of Commerce figures for 1925 in the heating and cooking apparatus field, this includes coal, gas and oil, central heating plants, warm air, hot water, steam and space heaters, produced products valued at $493,232,937, this total being made up as follows:

Cast iron hot water heating boilers....	$36,906,786
Steel hot water heating boilers.....	6,917,564
Cast iron steam heating boilers.....	13,738,041
Steel steam heating boilers.....	1,091,581
Radiators	54,855,447
Warm air heating furnaces totalling 505,162 units, valued at.....	46,823,998
Cooking stoves and ranges, all kinds, 3,572,487 units, valued at.....	116,671,403
Heating stoves and room heaters, 2,140,-174 units, valued at.....	28,014,527
Water heaters, domestic, 1,072,841 units, valued at.....	19,546,727
All other stoves and ranges, approximately 200,000 units, valued at.....	3,849,000
Parts and fittings, including steam, valued at.....	137,707,270

Approximately 800 manufacturers reporting show a combined monthly payroll of approximately 100,000 wage earners, and a yearly payroll of $130,-278,639, and these are your customers and made possible by the manufacturers' efforts.

These concerns spent for power alone, $173,229,-384, and it is again apparent that these manufacturers are of great value to the utilities as power buyers.

Gas Ranges Sold to Four Per Cent of Homes

Now let us analyze these figures. There were produced 1,397,299 gas cooking stoves and ranges, and figuring our population nationally at approximately 120 millions of people, with approximately 30,000,000 homes, we sold gas ranges to about 4 per cent of the homes. Is this what it should be?

These same manufacturers sold 596,818 gas heating stoves. Again, the report of the department shows about 400,000 oil and gasoline room heaters sold, or four-fifths as many oil and gasoline heaters as there were gas.

Now, for the water heaters the records indicate a total domestic sale of 1,072,841 units, out of which the gas water heaters totalled 823,057 units, which shows a larger percentage of the total than in the previous field mentioned.

I know statistics are not so pleasing to the ear, but with these as a background I hope they will bring you a true appreciation of the magnitude of the appliance end of this business.

Check these facts, if you will, and draw your own conclusions as to what the possible market we are not now reaching is.

How to Increase Sales Giving Concern

The question of how to increase domestic gas sales is one that is of great importance, and is causing considerable concern to executives of many properties. So much importance is attached to this subject that a special committee of the American Gas Association with George Whitwell as chairman is endeavoring to make a study, survey and analysis to present to the members at our coming October meeting on the question of the cooking load. This may bring enlightenment and help.

Primarily I am of the opinion from personal contact and observation that there are many companies that do not have a definite set-up or objective, and therefore, without a goal to shoot at, they drift. There are still many in our industry who think that it is not necessary to sell gas aggressively, that the public cannot get along without it, particularly for cooking; in other words, it is a domestic necessity. Men in this frame of mind in our industry are dangerous, and we have them.

I cannot help but feel, from information I have, but what there is an appreciable loss of domestic business the country over—and I believe this is a general belief.

I believe also that the backbone of the business

---

* Address delivered before the Mid-West Gas Association Annual Convention, St. Paul, Minn., April 20-22, 1927.

today is the domestic cooking load, and to substantiate this belief I call attention to a survey which was recently made at Brooklyn, N. Y. I am informed that upon its completion it showed very definitely that 85 per cent of the total send-out of the Brooklyn Union Gas Company was for domestic consumption. This information was conveyed to me by Mr. Wiske, commercial sales manager of the Brooklyn Union Gas Company.

This, if a fact, should awaken us to the desirability and the necessity of as energetic selling effort for gas cooking sales as for any other use.

There is a wide variance as to the extent domestic gas sales have been developed, and there is a condition which is represented by companies whose policies are outstanding, having developed the art of selling domestic gas to a high degree.

We have companies that have developed and use extensive advertising efforts to develop domestic cooking.

We have companies that do not sell appliances.

We have companies that maintain the sale of equipment as essential to success in obtaining domestic load.

We have companies maintaining large home service departments, a diversity of stores and auditoriums, highly trained, highly powered salesmen, co-operative plans with equipment manufacturers, rental schemes for use of domestic appliances, rates designed to develop a greater domestic use.

Then, we have companies that apparently feel the public must come and take their products away from them.

The Cooking Load Problem

Mr. Whitwell's Committee on Domestic Cooking sees a problem, and it is presented about as follows:

1. Is the domestic cooking load an essential part of our business?
2. If so, is it increasing, holding its own, or decreasing?
3. If it is decreasing, to what extent and why?
4. If we know the cause for decrease, is it economically possible for us to offset it?
5. What means are at hand in order to effect such offset?

As a member of Mr. Whitwell's committee, I am presenting this committee's problem as outlined and shall appreciate hearing from any member of this association with an answer, or his views, on these questions, and I will gladly pass these opinions on to the chairman of this important committee.

It is only by combining the best thought of the industry on this subject that we may hope to solve this problem, admitted it is a problem.

Six Cents of the Family Dollar

You have seen recently published tabulation of the General Electric Company on where six cents of the family dollar goes:

2. c to the railroad
1.26c for telephone
1.8 c for gas
.21c for water
1.3 c for electricity

This would indicate that additional expenditure for gas would work no hardship upon your individual consumers.

We have established a laboratory to bring about safe and healthful gas appliances. Even now this work is being felt.

This starts us off, then, with the right kind of appliances to work with.

Are we making use of this valuable adjunct to our business and cashing in on our investment in this service? If not, why not?

Let us sell the idea of the Blue Star home and not necessarily individual appliances. Let us as a sales organization of the utility, do as the plumber does with the new home builder; he sells a complete installation, bath, lavatories, laundry equipment, sinks, etc. Let us sell all of our domestic appliances, cooking ranges, space heaters, laundry equipment, incineration, artificial ice equipment and central heating plants. In other words, let us sell a complete service.

Women Are Demanding Leisure

The question of reduced cooking load is a difficult one to solve, but I believe it can and will be solved. The cause, I think, is obvious. If there ever was a time when women want leisure and freedom from household work, that time is the present. Women simply do not want to spend time in the kitchen; ample evidence can be found in the unprecedented business being done by the canned goods people, the increased use of canned goods and bakery products as compared with home cooked foods.

Conceding that the domestic cooking business is on the decrease, and assuming further decrease will mean loss of profits to the utility, how can we stop it and start the pendulum swinging the other way?

Any solution, I don't care what it is, will fail if it does not recognize the fact that modern women want leisure and convenience.

Just as true as the fact mentioned above is true, it is likewise true that both men and women still have an underlying appreciation of the purity, wholesomeness, flavor and general desirability of home prepared foods.

Our problem, then, is to take fullest advantage of this desire for home cooked foods, and to overcome the resistance caused by the modern woman's "convenience habit."

We must bring home to the housewife the importance of serving home made foods, and show her how she can do this without sacrificing the leisure which she considers her right.

Rate revisions or general gas publicity cannot do this. Neither can we rely on ordinary salesmanship, since the salesman is busy selling merchandise and cannot be expected to do a real job of getting women to cook their own foods.

Educational Publicity Needed

The only real solution seems to be a complete plan of educational publicity.

A plan that will bring women to realize the great

fallacy in trying to manage a home on the delicatessen basis successfully.

A plan that would convincingly prove to the housewife that she can have an afternoon off every day; that she can serve homemade breads and pastries as easily as she can buy them at the store; that she can do all these things because of the great improvements in certain appliances.

A plan that will show the housewife that summer heat need not force her to lock up her kitchen for the sake of keeping cool.

Such a plan calls for carefully constructed advertising, both national and local, and this should be supplemented by the liberal use of literature telling the same story, and last but not least, demonstrations by capable, well paid women. Appropriations should be made and Home Service Departments set up if we hope to do this job.

Improved Appliances Will Aid

The domestic cooking business is not shot to pieces by a long way, as is evidenced from the survey referred to previously and others that you all know of. The great modern improvements in the leading appliances can turn the tide, providing they are sold in a big way.

This may be a difficult job, but not nearly as tough a job as the talking machine people ran into with the advent of the radio. They improved their product and told their story in a smashing way, and have staged a surprising battle against almost insurmountable odds.

An educational campaign as suggested is the logical foundation on which improved selling methods can function, and I believe it is the only means by which we can get women into the frame of mind that will lead to a comeback in the domestic cooking business. What are we going to do about it?

The food and soap manufacturers carried twenty-five per cent less advertising three years ago than they do today. Their appropriations to increase the sale of their products which require the use of cooking or hot water have found it necessary to make this additional investment in advertising to keep their sales volume where it should be to show a profit. What have we in the gas industry, by way of comparison, done to get our share of the business these manufacturers create?

Another point I want to bring to your attention: I wonder how many are taking the fullest advantage of the study of domestic science in the various schools of the country, both public and private. It seems to me that the gas companies should do everything in their power to make every possible use of the school facilities, because if a child is brought up right in connection with the importance of home cooking, a very important step will have been taken in the right direction. What are we doing to take advantage and capitalize on this important work?

Too many of our selling organizations are selling a product on a price basis instead of on a service basis.

Sales Floors Not Always a Credit

Our sales floors in many places are not a credit to our industry and do not show the best and most improved appliances. How many sales floors are graced with a full enamel, oven control, warming closet, canopy range, selling upwards of $200 to $250? How can we expect to hold our business if we permit competitors to sell better products?

I am holding no brief for any manufacturer or any line, but I notice that some gas companies are selling a limited service in the sale of some appliances. I refer to hot water and central heating appliances now. If we have a good fuel, why should we jeopardize our business by selling a limited service such as is supplied by some appliances of both classes, or by conversion jobs in central heating plants?

It seems to me we should get entirely away from the price bugaboo and sell quality and service, if we wish to maintain and increase our domestic load.

Why should we sell two baths a day if a consumer wants and needs more? Why should we sell a conversion central heating plant job if it will not serve as satisfactorily or economically as a gas-fired central heating plant?

At the present time we have a comparatively new class in the gas appliance business and in the industry. House heating by gas is destined to play a very large and important part in the life of every company. Despite skepticisms, fears of peak load, lack of plant capacity or distribution systems, the central heating gas-fired plant is here, and no escape from the inevitable is possible.

Why, then, does not the whole industry get behind this new baby and feed it so it will grow rapidly and normally into a healthy child? Why do we clothe this business with an air of mystery? Why do we approach this business with awe—nothing strange about it, and particularly is this proven when the mail order houses have for years shown us the way by selling as high as 50 to 75 jobs per day by mail.

Why Should Guarantees Be Offered?

Why should we necessarily approach our prospect with a proposition with a guarantee to remove after a season's use, with a charge for use or rebating a large part of the agreed purchase price? Or why should we necessarily guarantee a certain maximum bill for fuel for a season's use, and if we do, why should this figure be placed at a maximum which we should know would never be reached?

This kind of selling cannot build the business of load or increase it at a very rapid rate.

Our competitors do not guarantee fuel bills; they sell a central heating plant on its merits, and only guarantee it to do the job from a heating standpoint.

The industry is inclined, I believe, to make the selling of central heating plants so technical that the average consumer backs away because he is afraid. It is not done in competitive fields.

Again let us sell convenience and heating service, and not gas bills, which seems to me now is our principal effort.

How many of us in selling our product, gas, can definitely answer questions on comparative costs of operation as against competitive fuels?

To illustrate my point, I am now asking how many in the room can tell me how much gas of 550 B.T.U. content it will require to produce a unit of manufacture, say in an enamel plant. By this I mean how many square feet of sheet porcelain enamel, or a pound of cast iron enamel?

I mention this because I believe we do not have sufficient data covering actual operations to give out to enable us to sell our product and guarantee results.

We, to be sure, can and do get operating results on trial runs, but that is under ideal conditions and not average working conditions covering a period of months.

Need for Accumulating Information

Let us endeavor to accumulate such information so that we can be armed and show our prospects results and not theoretical results or results of trial runs.

Many, many sales departments in utility organizations are not what they should be to do the job we have ahead of us to do.

It will be necessary, I believe, to look upon these departments with a different attitude and bring into them men of vision, initiative and sales ability, and to compensate on a basis competitively.

There are some sales executives that think selling must be done in season and that efforts out of season are useless. Of course, most of us appreciate this is a mistaken idea, but for the benefit of those who think otherwise, I will quote Federal Reserve Board figures covering five departments from a department store having a $200,000,000 purchasing power, showing the percentages of sales during July and August, which are considered off-season in our business. These departments were:

Furniture, which sold 20.98 per cent of the entire year in these two months.

Draperies, which sold 11.36 per cent.

Floor coverings, which sold 13.47 per ent.

China ware, which sold 11.62 per cent.

House furnishings, which sold 12.88 per cent.

This I mention to try and show the desirability of sales and consumption twelve months in each year rather than seasonal; and when it is all said and done we can materially improve our selling volume if we will work with the firm conviction that we have a product and a service which is worth more by far than we ask for it.

☼ ☼ ☼ ☼

WOMEN'S STOCKINGS INCREASE USE OF GAS WATER HEATERS

The present craze for light colored stockings, fabric gloves and fancy scarfs is directly responsible for a record-breaking increase in the daily consumption of hot water, according to a survey just completed by the General Federation of Women's Clubs in co-operation with the American Gas Association.

The Federation also found that more than 50 per cent of the persons in towns of 100,000 and over use gas-heated water. A residential survey brought out the fact that Dame Fashion is making the water heaters work overtime.

The average business woman who is particular about her person changes her light-hued stockings twice on sunny days and oftener when it is stormy, it is disclosed. Washable gloves, now in universal vogue, must be changed twice when there is an evening engagement, and both stockings and gloves are invariably washed at home in hot water every other night. Scarfs and bobbed hair are other factors contributing to an increased use of hot water, as are also the silken underwear.

An extra pair of stockings and gloves, it is said, are now considered just as necessary in the working girl's bag as the extra handkerchief and cosmetics.

☼ ☼ ☼ ☼

B.t.U.s* Cook Dinner
Without Your Attention
GAS SERVICE
B
T
U
U
*B.T.U. means British Thermal Unit, which is the unit of heat measurement.
When you consume a cubic foot of gas you use in your appliance 340 B.T.U.s.
The army of B.T.U.s is at your service.
Let the B.T.U.s cook the dinner for you in your absence. Set the regulator wheel on your range, when you return the meal will be ready.
By this method you secure more leisure, time for outdoor sports, or any other diversion. The B.T.U.s are busy little chaps. Turn a valve and they do the work.
Visit your Gas Office and inspect the various ranges, equipped with heat control, that are on display.
Telephone: TRIangle 7500
The Brooklyn Union Gas Company
The Busy B.t.u.'s Lighten Kitchen Cares

THE WATER HEATING LOAD

Suggestions for Educating the Public to Automatic Hot Water Systems

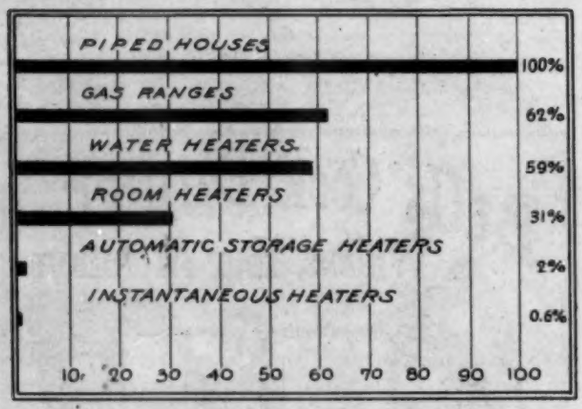
E. W. Pratt.

I HAVE listened to addresses without number and have read hundreds of articles in the various gas journals regarding the disappointment experienced in the sales of automatic hot water equipment for the home.

Statistics have been compiled, surveys charted and advice given ad lib., but still, so far as I am able to learn, no panacea has yet been discovered.

Many schemes have been advanced to entice the wily purchaser. Free trials, easy payments, allowances on old equipment, and sales campaigns have failed to have a permanent effect. These sales spurts usually leave conditions flatter and staler than before.

It is my opinion that these "hurrah" methods are fundamentally wrong. Permanent success in selling the product does not lie in that direction.



Idea Has Not Been Sold to Householder

There is a real reason why the sale of automatic hot water equipment is disappointing, and I am convinced it is because the ordinary householder or tenant has not been sold on the idea, and never will be by the present methods.

As an evidence of the small proportion of automatic hot water equipment sales compared with other gas appliances, I ask you to observe closely the following survey made by a gas company in New York State with a population of 150,000 inhabitants—84.4 per cent native white.

Piped homes	10,973	100%
Gas ranges	6,815	62%
Tank heaters	6,575	59%
Room heaters	3,357	31%
Automatic (storage) heaters	220	2%
Instantaneous automatic heaters	62	.6%

It is amazing to note that the number of automatic hot water appliances sold in proportion to the other gas equipment is surprisingly small. It certainly proves that there is something radically wrong.

As children are taught to walk, step by step, so should the education of the householder be carried on in easy stages.

Prospects Proceed Slowly

From experience, I find that prospects will not take the jump in one leap from the coal stove method to the automatic appliance. The price frightens them—it appears out of proportion to the promised service. Consequently, after being once interviewed, they are hard to interest again. I am alluding to the householder of moderate means, those who make up the bulk of a gas company's load. This group are careful buyers and must be approached with understanding. They will not fall for any "keeping up with the Joneses" idea of salesmanship.

These prospects should be led up gradually by first replacing the coal stove with a gas water heater. Thus they begin to have a taste of the convenience of gas hot water service and also become gas users.

The next step is to induce them, at a small cost, to install a "thermostat," making the gas water heater and boiler automatic. Now they become receptive prospects for the complete systems. Boilers and gas water heaters wear out and there is little difficulty in interesting these educated prospects in the more expensive and permanent equipment.

If it had not been for the low priced automobiles the expensive ones would not have had such widespread sale. Ninety per cent of investors in expensive cars started with a cheap one. It was the people of moderate means who made Henry Ford the richest man in the world. In fact, Ford made the automobile and gasoline industry. I contend that the automatic hot water equipment business for the gas companies can be successfully accomplished on the lines as set forth above.

During the period of evolution the gas companies would reap the benefit in profit on the required appliances and the extra output of gas would lay the foundation for an all-year-around demand and not a spasmodic seasonable market.

COAL CENTER FAVORS GAS FOR WATER HEATING

Scranton, Pa., the capital of anthracite mining in the United States, favors gas for its water heating, despite the relatively low price for coal, ten dollars a ton. Three per cent of the gas meters of the Hyde Park Gas Company, of Scranton, serve automatic water heaters, including five out of eight banks, 18 out of 35 large restaurants, four out of seven hospitals, eight out of five coal company office buildings.

Despite the fact that coal is the basis of prosperity for Scranton, and that many of its leading citizens are directly concerned with the coal industry, gas for water heating has won out because of its comfort and convenience phases.

By far the most interesting installation of a gas-fired water heater is that in the dressing room of a prominent coal mining company. As the miners emerge from the shaft after digging anthracite, they get their showers in gas-heated water.

¤ ¤ ¤ ¤

THE INDUSTRIAL HEATING PROBLEM*

Gas as Ultimate Fuel Depends on Important Factors Other Than B.t.u. Value

S. L. Drumm,

Industrial Gas Engineer, New Orleans Public Service, Inc.

THE solution of the industrial heating problem consists of furnishing economical and efficient heating service. Does gas meet these requirements? Does gas as the heating agent furnish economical and efficient heating service? Gentlemen—we must treat this subject with an open mind and with all fairness to other fuels. The champions of electricity, fuel oil, and solid fuels are thoroughly convinced that their respective heating agents are the answer to the industrial heating problem. We do not doubt their sincerity—and it remains for us to conclusively prove that gas is one of the solutions—if not the only solution to the industrial heating problem.

Quality and Overall Cost Determining Factors

The selection of a suitable fuel for a heating problem should be made with appreciation of the fact that the value of the result ought to be measured by the quality and overall cost of the finished product. The price or consumption of the specific fuel is not the governing factor. The real problem from the investor's point of view is that of producing a quality product at low cost. The fuel that will produce this result, the specific conditions being considered, is the fuel that the investor wants. There can be no abstract comparison of the different fuels—as each form has its fields of usefulness as well as limitations. There are many factors which influence the choice under specific conditions, therefore, the limitations which might effect the use of one fuel will not effect the use of another.

To more fully understand the conditions which often confront us, let us make a comparison of the various fuels on the basis of cost per million B T. U.:

Bituminous coal at $5.50 per ton	$ .17
Natural gas at 25c. per 1,000 c. f.	.26
Fuel oil at 6c. per gallon	.42
City gas at $1.00 per 1,000 c. f.	1.67
Electricity at 1c. per K. W. H.	2.93
Gasoline at 30c. per gallon	3.53

*Presented before the Thirty-second Annual Convention, Southwestern Public Service Assn., New Orleans, La., April 26-29, 1927.

B.t.u. Basis for Cost Not Conclusive

It is evident from the above that bituminous coal is the cheapest fuel—based on a B.t.u. basis. Why, then, isn't bituminous coal used for all industrial heating problems? Because, gentlemen, the above cost based on a B.t.u. basis means absolutely nothing, and is simply one of the costs that enter into the unit of the finished product. To arrive at a unit cost of production many other costs must be considered. The use of coal or coke in a manufacturing business involves the following expense:

I. Invoice cost.
II. Freight.
III. Switching (spotting cars—demurrage).
IV. Unloading.
V. Storage.
VI. Firing (labor involved).
VII. Ash disposal (labor involved).
VIII. Miscellaneous (tracing cars, weighing, smoke prevention, etc.).

The above costs plus other intangibles common to certain business are the determining factors in the unit cost of production.

Fuel oil is also used extensively in industrial heating operations and is probably the liveliest competitor of gas. Fuel oil, the same as with coal, has many factors affecting its costs at the burner. The expense involved in the use of fuel oil is as follows:

I. Invoice cost.
II. Freight.
III. Switching (spotting cars—demurrage).
IV. Unloading.
V. Storage.
VI. Pumping.
VII. Burner expense (carbonizing—high pressure air or steam to atomize).
VIII. Miscellaneous (uncertainty of supply, etc.).

Each of the above costs a direct relation to the unit cost of production, and in order to correctly summarize the costs of operation they must be given due consideration.

Gas Is More Economical in Many Cases

It appears, therefore, that when all the costs involved in the use of coal and fuel oil are considered, that gas in many cases could be used more economically. Practically all of the costs of operation, necessary when using coal or fuel oil, can be eliminated with the use of gas. To begin with, gas is sold "delivered at the burner as required." There is no investment necessary for the purchase of a fuel supply. Gas is paid for after it is used. There are no such items as freight, switching, unloading or storage. The labor required when using coal or oil can be disposed and this saving credited to the use of gas. Gas, therefore, can compete with coal and fuel oil—on a unit cost of operation basis. It is the only way that industrial gas can be sold—and we of the gas industry must forget all about fuel costs and B.t.u.'s and sell our product on a basis of reducing

(Continued on page 541)

WINDOW DISPLAY ADVERTISING

That sells more gas to pleased customers

Ray Martin

Display Manager, Consolidated Gas Company of New York

Public utility corporations do well to co-operate with civic drives or national campaigns. This is particularly true when such a campaign fits in so perfectly with the exploitation of one of our gas appliances.

The principal element of attraction in this window display advertisement is an exact color reproduction of the twenty-four sheet billboard poster used nationally by the International Association of Fire Chiefs.

When such a reproduction is exact in detail it acts as a double edged sword in chopping down sales resistance—in this case, gas incinerators. In the first place, while Mr. Consumer is already familiar with seeing this billboard request to "Help us prevent fires," only in the window display is a solution offered. Secondly, each person who has observed this display subconsciously supplies the answer—gas incineration—each time he sees a billboard carrying this poster.

Try it out yourself. Take a good look at the above reproduction. It is not nearly as forceful as the original, but scrutinize it. Then see what happens in your mind the next time you see this poster on a billboard. From now on this poster will make you think of gas incineration. And how much do you imagine a public continually reminded, indirectly, of gas incineration is worth to a gas company? It's worth while tying in with all similar national or local campaigns.

This particular display is extremely simple and. consequently, inexpensive.

AMERICAN GAS JOURNAL

STANTON G. KRAKE, *Managing Editor*
HENRY M. RILEY, *Editor*
A. M. GLEASON, *Secretary*
ISMAR GINSBERG, *Associate Editor*

Vol. 126. No. 22 **NEW YORK, MAY 28, 1927** **Whole No. 3634**

For Better Service to the American Gas Industry

FOR sixty-eight years the American Gas Journal has continuously served the gas industry of America as a weekly publication. Throughout this long period the efforts of its editors and its publishers have been consistently to give their best to the industry. The response to this effort has been gratifying, and the long and successful life of the Journal is clear evidence of the industry's appreciation.

BUT new times and new developments often demand a new basis of service. Such is the case today. To meet the evident need and the clear responsibility before it American Gas Journal has decided to change its basis of publication; beginning with the issue of August, 1927, it will appear as a monthly. This change is the result of a careful and comprehensive investigation which has continued through the past year as to the needs and the wishes of the men in the industry. A large number of the leading technical and management officials of the business have been consulted. Their response to the Journal's inquiry has been cordial and, surprising as this may seem, almost unanimous. Approximately 95 per cent. of those consulted have expressed a decided preference for a monthly instead of the present weekly. Such a mandate from the industry could not be ignored, even if we would.

IN CONSIDERING this change the editors of the Journal have been amazed to find the number of prominent men in the business who have expressed regret that they could not give adequate time for the proper reading of the weekly. Out of nearly 300 responses favoring a monthly publication nearly all expressed their preference in this way. And, too, they felt that a monthly Journal would not only be more convenient to them, but could also be better edited and include better matured news reports, more carefully edited articles, and more comprehensively treated departmental material.

TO THE preparation of such superior editorial material the editors of American Gas Journal pledge themselves without reserve. And the publishers of the Journal unite with the editors in the assurance that neither time nor money will be spared in rendering to the American gas industry the very best of editorial service which their ability and means make possible.

TO OUR SUBSCRIBERS:

The above announcement explains itself. The subscription price of the monthly will be $2.00 per year. All unexpired subscriptions as of July 31st will be extended in proportion to the unexpired term of each on the basis of the new subscription rate. I appreciate your support in the past and I am sure the greatly increased service, due to the change, will meet with your approval.

S. G. Krake

INDUSTRIAL GAS LESSONS

IF IT'S DONE WITH HEAT — YOU CAN DO IT BETTER WITH GAS

Lesson No. 171

Blue Water Gas

The Waste Heat Boiler

It has been indicated in the previous lesson that the purpose of the waste heat boiler is to recover both the sensible and the potential heat that is contained in the blow gases. The sensible heat is recovered by direct absorption in the water medium, while the potential heat can be recovered only after the carbon monoxide in the blow gases has been burnt to carbon dioxide in the combustion chamber which is located directly before the waste heat boiler. Waste heat boilers are connected not only to the blue water gas generator, but also to the carburetted water gas machine and in this case to the superheater. In this case the connection is made direct without the interposition of a combustion chamber.

Two Types of Waste Heat Boiler

The waste heat boiler itself may be of two types. The first of these is the vertical water tube boiler and the second is the horizontal fire tube boiler. In the first type the water flows through tubes which are connected at the top with a water reservoir or stream drum and at the bottom with another water reservoir or mud drum. The hot gases pass through the bank of tubes in which the water is heated thereby and converted into steam. In the horizontal fire tube boiler the construction is such that two shells are connected to a single steam drum. The water surrounds the tubes on all sides and the fire gases pass through the interior of the tubes; thus the water is heated and converted into steam. The horizontal fire tube boiler is also made in single shell. The boiler can be made in such a manner that both the blow gases during the blow and the blue gas during the run are passed through it, and thus the sensible heat in both of them is rendered available for useful purpose.

The installation of the waste heat boiler and combustion chamber is made in such a manner that the blow gases from the blue gas generator are passed directly into the combustion chamber, where they are mixed with air and burned and then the mixed gases of combustion and residual blow gases are passed through the fire tubes or between the bank of water tubes in the waste heat boiler. The waste heat boiler installation is provided with two wash boxes which are for the blue water, so that it is possible to pass the blue water gas through one of these boxes and hence through the waste heat boiler and finally into the hydraulic main, or through another of these wash boxes which is directly connected with the hot main. In this case the blue gas does not pass through the waste heat boiler. The installation is also provided with stack valves, so that the blow gases may be passed directly out of the generator and into the stack or first through the combustion chamber and waste heat boiler through the second stack valve and thence into the stack.

Blower

Another auxiliary apparatus used in the blue water gas plant is the blower. This supplies the air for blowing or blasting the generator. The blower can be either connected directly to the blast main of the generator or else to a blast main manifold serving several generators where more than one machine is used in the manufacturing process. The blower is usually of fan type and may be driven directly by a steam turbine or an electric motor or indirectly by means of a belt connected to a shaft driven by a steam engine.

Both air and steam meters are used on the blue gas generator. These are important instruments, for it is necessary to measure the flow of both air and steam as fed into the water gas making machine. There are four general types of air meters. The flat plate orifice, the flow nozzle and the Venturi tube all work on the principle that when a constriction of any sort is introduced into a pipe in which a mass of fluid is flowing the pressure after the constriction is less than before. This pressure difference can be measured in a suitable measure and converted into pounds of fluid moving in a unit time. In the fourth type, which is the Pitot tube instrument, the pressure differential is caused by impact of the moving fluid.

Meters of the orifice or Venturi type are also used in measuring the flow of steam. The pressure on both sides of the orifice is usually transmitted to an indicating or recording instrument through pipes which are filled with water.

THE INDUSTRIAL HEATING PROBLEM

(Continued from page 537)

cost of production to the manufacturer. Gentlemen, the future of industrial gas is the future of the gas industry—and as an industrial gas man, I believe that our product is the solution of the industrial heating problem, because with gas we can render an economical and efficient heating service.

What Are We Doing to Further Industrial Use of Gas

What then are we of the gas industry doing to promote the use of gas for industrial heating? What are the gas companies doing to promote the use of industrial gas? We must all, sooner or later, see the potential value of gas as the industrial fuel of the future. Quite a bit of promotion work has been done and is being done—but there is still a great deal of work ahead. Briefly, we must devise (1) better methods for handling industrial gas; (2) better equipment in which to utilize it, and (3) better men to represent the industrial divisions of the gas company.

Some time ago I had the pleasure of hearing a talk given by a manufacturer outside of our industry, and his criticism of the gas industry (with some few exceptions) seemed to me to be most constructive. His views were unbiased and from one who is "outside looking in." Some of his recommendations to the gas industry for fostering the use of industrial gas, and which I pass on to you in all earnestness were:

1. Industrial heating is nothing more than the development of kitchen cooking.
2. Sell the idea that gas has a place in the economic sun.
3. Wholesale rates are absolute necessary.
4. B.t.u. standards must be changed.
5. Cultivate sense of limitation.
6. Spend less money (gas companies) on outside surveys and advertisement and concentrate on own force.
7. No business is worth while unless it is put on the line to stay.

Finally, gentlemen, permit me to emphasize the point that industrial gas is the ultimate fuel—only when the value of the result sought is to be measured in terms of the quality and overall cost of the finished product.

☼ ☼ ☼ ☼

DOES THE CLOCK THERMOSTAT SAVE FUEL?

Although engineers are familiar with the savings effected by the clock type thermostat on coal-fired jobs, the statement has been made and accepted by many that a clock thermostat which automatically lowers the temperature during the night or sleeping hours, with automatic return to the daytime temperature in the morning does not save fuel when used with a gas burner.

The argument most commonly used against clock thermostats in gas heating is as follows:

When the clock lowers the thermostat indicator at night, the water in a hot water or steam system cools down to such a point that it requires the burning of more gas to raise the water temperature and warm the house, than it would to maintain the temperature during the night at 70 degrees.

While this argument seems logical, it does not stand the test of a detailed analysis.

1. The argument is confined entirely to hot water and steam jobs. It is granted that on warm air jobs a saving is shown.
2. The argument is based on the assumption that when the indicator is lowered the gas burner is shut off all night. If this were true, the argument might perhaps be sound, but experience teaches that the burner always operates during the night in direct proportion to heat losses from the home and outside weather conditions.
3. Statistics of the weather bureau show that night temperatures average about 15 degrees lower than day-time temperatures. Hence if it requires a given amount of gas to warm the house to the daytime temperatures of 70 degrees, it would require still more gas to maintain the night temperature at 70 degrees due to the lower outside temperature.

Method of Proof

In this case, as with all theoretical arguments, one theory is just as good as another. The only exact solution of such a problem is reached by applying scientific theory to the conditions found in actual practice. It is very easy on gas burner installations to obtain accurate records of gas consumption and thus provide an accurate basis of comparison.

Such data are given in an article by Glenn C. Carnahan, superintendent of the house heating department of the People's Gas Light & Coke Company of Chicago, entitled, "What It Costs to Heat with Manufactured Gas." Mr. Carnahan's article is so well known by gas company engineers who are planning to take on a house heating load that a detailed account is hardly necessary, but an important fact is that his figures are made on a basis of 55 degrees for night temperature (8 hours) and 70 degrees for day temperatures (6 hours).

Analyzing Mr. Carnahan's figures, we find that in the city of Chicago, if the temperature is steadily maintained at 70 degrees for 24 hours per day, we must supply heat equivalent to 167,193.6 degree hours; while by lowering the temperature during eight hours of the night to 55 degrees, we need supply the equivalent of only 140,313.6 degree hours, a saving of 26,880 degree hours, or 16 per cent. In other temperature zones where the average outside temperature is lower or higher than 38.9 degrees F., the savings by clock control will be in direct ratio.

Many theories when reduced to practice are not accurate, due to unforeseen and unexpected factors. This method of computation, however, has proved out in actual practice. The People's Gas Light and

(Continued on page 544)

HUMIDITY, HEAT AND HOME SERVICE

By William H. Matlack

THE most difficult task the sales department of a metropolitan or even the small town gas company has to cope with is keeping up customer interest in home economics and the culinary art during the coming hot summer months.

In many instances gas company officials frown on any expenditures during "dog days" proposed by the sales department to combat the so-called summer sales slump of gas burning appliances. They flatly refuse in some instances to permit the merchandising manager to expend either time, energy or money to speed up sales during the summer months. This has come to be more or less a fixed rule with many sales managers who depend upon precident and only a smile is forthcoming when some one suggests that there is a way in which to even up the sales curve.

There Are Exceptions

Yet there are exceptions to the rule; one of them is found in St. Louis, where the Laclede Gas Light Company have been doing things for two years. This company is overcoming the odds by the obvious; they are simply continuing to put forth effort to promote a comprehensive understanding of the importance of their service to the community even in the hot months, and in order to impress the home manager and secure spontaneous attention they are reversing the order and are selling through schooling the home manager and the home manager to be, by way of a series of cooking contests.

The Laclede Company inaugurated this sales pro-

Two Candy-Making
Contests for Girls
Four Prizes
Both contests start Monday, June 22, one for girls 7 to 12 years old, the other for girls 12 to 20. The first week hard candies such as peanut brittle and the like are to be made, the second week soft candies such as fudge. Bring your candy to the Home Service Department, Laclede Gas Building, Olive at Eleventh, any day, or to the Cherokee Branch (2744 Cherokee) between 2 and 4 p. m. on Monday, Wednesday or Friday, or to the North Grand Branch (3524 N. Grand) between 2 and 4 p. m. on Tuesday or Thursday. All winners to be announced at a party at Home Service Department, Laclede Gas Building at 2 p. m., Thursday July 9.
Free cooking classes every weekday but Saturday at 2 p. m. Cooking talks from Radio Station KSD every weekday at 10 a. m.
PRIZES FOR EACH WEEK
Younger girls, miniature kitchen, with doll, toy range, kitchen cabinet, dishes and so on. For older girls—Choice of automatic ice cream freezer and set of cooking thermometers. (See them in our windows.) Our cooking demonstrators will judge the candy.
If you have questions phone
Home Service Department
The LACLEDE GAS LIGHT COMPANY
OLIVE AT ELEVENTH
CENTRAL 3800

motional idea in 1925 by conducting a candy-making, baking and canning contest, which was so successful and so well attended that they decided it should

become a regular number on their summer sales program.

To Pique Female Interest

In speaking of the first contest, Vincent M. Carroll, director of public relations, said: "Candy-making, canning and baking contests were utilized last summer by the Home Service Department of the Laclede Gas Light Company to pique the interest of St. Louis women. And they were successful."

It might not have been necessary, for surprising numbers of the women of this conservative city had become regular clients of the Home Service Department. More than 15,500 of the mhad attended its free cooking classes and telephone and mail requests for recipe sheets had kept the department's office busy. Hundreds of letters had attested to the interest of women of this entire district in the cooking lectures broadcast daily from Radio Station KSD, the St. Louis Post-Dispatch, and the demonstrator at work in the window kitchen every day attracted a throng.

But this had been a hot dry summer in the Middle West. Energy had evaporated rapidly under the grilling sun. So we decided to take no chances.

First came a pair of candy-making contests for girls, which Miss Helen Wethrell, director of the department, decided to start June 22. The first week simple candies were made, the second week more difficult kinds. Two prizes were given each week, one for girls seven to twelve years old, another for those twelve to twenty. For the younger girls a miniature kitchen, completely furnished, and a dressed doll were given each week. The older girls each week were allowed to choose between an automatic ice cream freezer and a set of cooking thermometers. At the end of two weeks a party was held in the Home Service auditorium at which the prizes were awarded. The contest was a huge success.

Canning Contest

Then on July 13 began a two weeks series for women, first a canning contest, the second a baking competition.

Newspaper advertising announced the contests, the only restriction being that all entrants be residents of St. Louis. A pint sample of canning or a specimen of baking, or both, accompanied by the name and address of the entrant, and a copy of the recipe used was to be sufficient. Two gas ranges and two tank water heaters were offered as first and second prizes in the two contests. Three hundred and ten women entered and the party on July 31, at which the winners were announced, was attended by more than five hundred.

On Saturday morning, September 13, a children's party was held in the Home Service Auditorium. More than four hundred and fifty youngsters attended, each accompanied by one or more parents. For entertainment stories were told by a well-known local reader and at the conclusion of the party each child was presented with a miniature gas range by which to remember the happy hour.

No Slump in Attendance

So the summer slipped by and there was no slump in the attendance at the Laclede's Home Service Department.

With this successful, workable plan the company has decided that women are interested in Home Service Work even when the thermometer hovers around 100 degrees in the shade and "old man humidity" fags the "he-man."

What the Laclede has done others can do. Often it is possible that folks lose interest in doing Home Service work for the simple reason that they hear too much conversation on weather conditions. This work of arousing interest is accelerated by employing a contest which is productive in more than one way for the gas company and worth many times the cost of the prizes, advertising and other expense —as such contests not only help to solidify the domestic load of today, but materially help to secure an increased future load.

¤ ¤ ¤ ¤

LARGEST HOME SERVICE SCHOOL EVER HELD IN BROOKLYN

What is considered the largest home service school ever held in Brooklyn was given at the Academy of Music on May 2, 3 and 4, and on the evening of May 4. The demonstrations were given by the Brooklyn Eagle with the assistance of the Brooklyn Union Gas Company. Other public utilities, among them the Edison Company, and merchants throughout Brooklyn also co-operated in this affair.

The Academy of Music, which seats 2,200, was crowded from pit to dome at each one of the sessions. The Fire Department insisted that the department rules be enforced and there was very little standing room in the rear of the hall. It is estimated that 10,000 people attended the school during the four sessions.

PRIZES OFFERED

The demonstrations were given by Miss Jessie DeBoth, assisted by Misses Ruth Soule, Martha Louise Grant, Mildred Magonigle and others of the home service department of the Brooklyn Union Gas Company. The gas company offered four door prizes of standard gas ranges, which were won by Mrs. H. H. Draper, 446 East Twelfth Street; Miss A. F. Green, East Fourteenth Street; Mrs. H. M. Merrill, 430 Sterling Place, and Mrs. E. E. Donovan, 522 Sixty-eighth Street.

On the final evening Harris M. Crist, managing editor of the Eagle, and the Hon. James Dunne, Supreme Court Justice of Kings County, demonstrated the making of a "Baked Alaska" on two gas ranges which were installed on the stage. All of the gas installation was done by the Brooklyn Union Gas Company.

DOES THE CLOCK THERMOSTAT SAVE FUEL?

(Continued from page 541)

Coke Company of Chicago use this formula in a monthly checking of actual consumption against estimates.

If the arguments against clock control were sound, the worst showing would be made on hot water systems. In Mr. Carnahan's article he lists 37 typical hot water jobs, ranging in size from a frame bungalow, exposed, five rooms, with 400 square feet of hot water radiation, to a three-story brick and frame, well exposed, 23-room residence, with 2,515 square feet of hot water radiation.

"Heating and Ventilating" Views

A comment made by the Heating and Ventilating magazine establishes beyond question: First, the general all-around accuracy of this method of determining fuel consumption; and, secondly, its accuracy as applied to hot water heat. This comment is:

"A most interesting coincidence has developed as the result of analyzing the figures presented by Mr. Carnahan, exemplifying the cost of gas heating in Chicago. If we add together all of the gas consumed on all the hot water jobs for the entire season and divide by the total rated load, we find that it required 706.8 cu. ft. of gas per square foot of radiation for the season of 1924-1925.

"If now we take the curve developed by the American Gas Association and shown in connection with an article entitled, 'Practical Notes on House Heating by Gas,' in the Heating and Ventilating Magazine for December, 1924, we find from this curve that the cubic feet of gas per square foot of installed water radiator per degree day is 0.115. If this is multiplied by 6150, the number of degree days in the Chicago territory for the heating season of 1924-1925, we find that theoretically there would be required 706.9 cu. ft. of gas for the season. Such remarkable checking is, of course, a coincidence and could not be expected as the usual thing. However, it clearly exemplifies the value of the data developed by the American Gas Association, and the accuracy with which gas consumption in any part of the country may be predetermined."

This verification of Mr. Carnahan's figures establishes his method of computation as the correct one for calculating gas consumption under any given heating conditions. From the very nature of Mr. Carnahan's formula, it is therefore evident that a lower room temperature at night represents a definite saving of fuel, accentuated by lower outside temperatures during the hours of sleep.

With a clock-type thermostat a definite amount of fuel of course is required to heat the house in the morning to the daytime level. This, however, is insignificant in comparison with the total saving demonstrated by Mr. Carnahan's formula.

The soundness of this conclusion is borne out by a careful test conducted by a heat insulating company, which operated a gas-fired boiler for one season with ordinary thermostatic control and for another season with clock control. The recorded saving in favor of clock control was 19 per cent.

WHEN THE LAST PAYMENT IS MADE

By Frank H. Williams

HERE'S an actual occurrence which may offer some worth-while ideas and suggestions to gas company managers and executives:

A young married woman in a Western city was bubbling over with joy one day. Her face was wreathed in smiles and it was evident to all of her friends and relatives that something very pleasant had happened to her.

When this young matron was questioned as to the reason for her happy state, she replied in this way:

"I'm going down to make the last payment on our gas range. When we bought the range it looked like altogether too much money to pay for it, and my husband said we'd never be able to keep up the payments at all and that we'd be sorry we bought it. But we have kept up the payments without any trouble and I'm not in the least bit sorry that we bought the range. Instead of being sorry, I'm awfully glad we bought it, because it has meant the world to me in the way of making housework easier and all that sort of thing. Believe me, it's quite an event for me to go down and make the last payment on the range, and I expect that the gas company will give me an engraved card of thanks or something."

Felt Company Should Do Something Special

The young lady made this last statement in a jesting tone of voice, but she meant it just the same. She really did feel that the gas company should do something special to mark its appreciation of the importance of the last payment on the range to her.

But when the young lady returned from the gas company her manner was very much subdued indeed. In fact, she looked as though she had been very much disappointed and chagrined. When a friend asked her what the trouble was she blurted out her story in these words:

"When I went down to the gas company to make my last payment they just didn't do a thing about it. They didn't say a word to show that they appreciated the way in which I've always made payments right on time and they didn't congratulate me or anything. They just treated it as though it was simply another ordinary payment. I was so disappointed! It makes me feel as though I never want to buy anything there again."

And perhaps she never will.

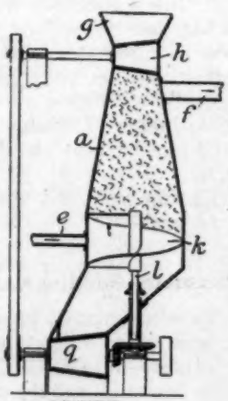
That's the way a great many people who buy ranges from the gas company on the time payment plan feel about their purchases. They feel that the proposition of making the final payment on a range or any other purchase at the gas company is a big

(Continued on page 546)

PROGRESS IN GAS TECHNOLOGY
Domestic and Foreign

DISTILLING CARBONACEOUS MATERIALS

APPARATUS for the extraction of oils from carbonaceous material by internal heating comprises a vertical retort **a** of circular cross-section which is charged and discharged by rotary gas tight drums **h, q,** and contains a rotary helical fuel support **k** driven by a shaft **l.** Super-heated



265046

steam from a pipe **e** serves to distil the material, the volatile products from which escape by an outlet **f.** In an example, when bituminous coal was treated the steam was admitted at a temperature of 450 deg. C. and 20 lbs. pressure. (British Patent No. 265,-046.)

¤ ¤ ¤ ¤

TESTS ON FRENCH AND AMERICAN CAST IRON PIPE

THE Bureau of Standards has issued a report (see Technologic Paper No. 336) on the results of tests made on six-inch cast iron pipes of American and French manufacture. The testing of the pipe included the following determinations. First the dimensions of the pipe were measured, then the density was determined, and, third, a chemical analysis was made. Then followed tests on the hardness, the transverse strength, ring test, shearing strength, impact test, hydrostatic test and finally the microstructure of the pipe was determined. The testing procedure is explained in detail in the original report. Various samples were used, the pipe of American make being cast vertically in sand molds and the same was true of the French pipe.

The tests showed that first of all there was no difference in the strength of the cast irons. There was, however, a decided difference in deflection, the French cast iron having considerably less deflection than in any other case. Thus in compression, machined rings the deflection in the case of the French cast iron was 0.101 inch and that of the American cast iron 0.170, while on unmachined rings it was 0.060 and 0.093 respectively. On the other hand in transverse tests the deflection on machined coupons was 0.035 for the French cast iron and 0.069 for the American. The strength of the American cast iron in shearing was 30,600 pounds per square inch and of the French cast iron 32,350, while the compressive strength was 42,000 for the American against 46,750 for the French on machined rings, and the strength in transverse loading was 42,660 for the American and 50,100 for the French on machined coupons.

The French cast iron was more brittle, which was evidenced by the sudden failure in the ring and transverse tests. It was indicated that the French pipe would have to be handled more carefully than the other pipes in order to avoid damaging it. It must, however, be remembered that in the ground the static strength of the pipe is more important than resistance to impact. Comparatively few defects were found in the cast irons. All the pipes were sound and complied with the specifications of the hydrostatic test.

The report is concluded with a discussion of the methods of testing cast iron, and it was pointed out that two principal questions are to be considered. The first of these is the effectiveness of the test in revealing the properties of the pipe which is important in the service conditions, and, second, there is the cost of making the test.

¤ ¤ ¤ ¤

HANDBOOK ON GAS FURNACES

A new publication has just come to hand from Portland, Oregon. It is entitled "Handbook of Gasco Furnaces" issued by the Househeating Division of the Sales Department of the Portland Gas & Coke Company. It is nicely illustrated, devotes a page to the advantages of heating with gas, another page to what owners say.

One page is given over to the designing of a warm air heating system, and the following page to determining the size of a furnace and warm air pipes for residence use.

The next page shows diagrams, and another page is devoted to roughing in dimensions.

The capacity of the Gasco furnaces are given in detail, also the cost of heating of various fuels, showing that in Portland gas as fuel compares very favorably with any other fuel. Typical instances of five to ten room houses and their cost are given so that

prospective customers may get an idea about what the consumption will be per annum. The following page "specifications for more warm air heating system" and another beautiful Portland home with a very attractive Gasco furnace installation.

The final page is devoted to installation, chimneys, humidifier, kitchen heater, safety, and easy payments, while the back page gives a very clear representation of Mr. Hartog's famous spotless kitchen, where the writer was advised by a sign painted on the floor, to wipe his feet before entering the basement. On the right-hand side is the work table for the boy "where the coal bin used to be," and on the other side, a little rug with a small table and a couple of little chairs and building blocks with a sign describing that this is for the kiddies where formerly the wood pile used to be.

¤ ¤ ¤ ¤

WHEN THE LAST PAYMENT IS MADE

(Continued from page 544)

event in their lives and that the importance of the event should be realized by the gas company with some sort of special comment or something of that sort.

What Would Delight Many

In fact, a great many people would feel delighted if the gas company would present them with some sort of an engraved diploma or something like that indicating that the final payment had been made. Also many folks would be delighted if the sales manager of the gas company or some other executive of the company would personally congratulate them on making the last payment and in this way show that the gas company was really appreciative of the whole proposition.

As it is, there isn't any special doing when the last payment on a range or a heater or some other article is made, and, consequently, many folks get the idea that all the gas company cares about customers is to get them to make purchases and get their money. And it does seem as though all this would offer a mighty good opportunity for the gas company to do things which would make a great hit with all its patrons at the time the patrons complete their payments on purchases and which would in this way cement the friendship of the patrons forever and make it just that much easier for the gas company to sell additional articles to the customers.

Suggested Letter

For instance, it would be the simplest kind of a proposition for the company to send this sort of a letter to all installment purchasers about two weeks before final payments were due:

"Mr. and Mrs. Jack Smith,

"City.

"Dear Customers:

"We note with pleasure that you will soon be making your final payment on the gas range purchased from us about a year ago, and in looking over your account we note that you have never been behind in making payments. We appreciate this promptness on your part and wish to thank you for it and congratulate you on the manner in which you have handled this contract.

"Of course, we want to do something special to show you how appreciative we are, and we feel that, perhaps, you will want to continue this easy method of saving and acquiring needed household articles. Consequently you may want to purchase some other appliance at our store after completing your final payment on this gas range, and so we are going to offer you a credit of 15 per cent on any article you purchase from us at the time of completing the present contract. This fifteen per cent credit will be applied on the cash price of the article or will be received as a final payment on any new article you buy.

"We believe that this is the best way to show our appreciation of what you have done, and when you come to the office to make the final payment the writer of this letter will be very glad to see you personally and to talk with you about your range and about the possibility of going on with your savings through the purchase of an additional household article from us.

"Again congratulating you and thanking you for your patronage, we are"—

And so on.

Might Stimulate Additional Buying

Many of the folks who finished paying for articles purchased at the gas office might be attracted by this 15 per cent credit—or 10 per cent credit, or whatever it might be—and would purchase additional articles accordingly. And if this were the case the cost of selling such articles to the purchasers would be very small indeed, thereby justifying the gas company in offering this credit of 10 or 15 per cent on such purchases.

Also the proposition of asking all folks who made their final payments to get in touch with one of the company's executives at the time of making such payments would be a splendid thing, as it would give a chance for getting across some sales talks which would result in piling up more business for the company.

Or if the company didn't care to send out such letters, it would be a fine thing for the cashier of the company to notify the sales manager or some other executive, when folks came in to make their final payments, and then the sales manager or other executive could come out and talk to such folks and congratulate them and then try to sell additional appliances to them. This sort of thing would make a deep impression on folks and show them that their patronage was highly appreciated and it would undoubtedly result in the gas company putting numerous sales across that otherwise might not be made.

Yes, there is no doubt that the folks who make their final payments on gas appliances are very good prospects for the gas company for the sale of additional appliances, and it will be well worth while for the company to go after them in these ways or in additional ways.

NEWS OF THE GAS INDUSTRY

Six Employees Receive Sam'l T. Bodine Meritorious Service Awards

In the presence of four hundred officials of the United Gas Improvement Company and Associated Companies, in attendance at the annual U. G. I. Management Conference in Philadelphia, six men received the first Samuel T. Bodine Meritorious Service Awards. The presentations were made by Mr. Bodine, chairman of the U. G. I. board of directors, at the opening session of the conference on May 17.

The Samuel T. Bodine Meritorious Award was established by the United Gas Improvement Company for U. G. I. and Associated Company employees "for extraordinary effort, without regard to self, toward maintaining uninterrupted service, or in some manner indicating exceptional fidelity to the public interest."

The first medal struck was presented to Mr. Bodine by Philip S. Gadsden, a vice-president of the U. G. I. and chairman of the U. G. I. Meritorious Award board, for "forty-five years of unceasing devotion to promotion of the highest standards of public utility service throughout the United States."

Mr. Bodine, who received a three-minute ovation, was deeply affected by the tribute and the reward. In a brief address he said: "I consider this award not as a personal one, but that it is presented to me as a representative, and I accept it as a well merited recognition of the efforts of many men who have devoted their lives to public service during the past forty-five years."

The other awards were made to:

Edmund Thayer, manager oxygen-acetylene department the U. G. I. Contracting Company. For removing filled cylinders of oxygen and acetylene gas from contact with a cylinder of burning acetylene gas.

Mr. Thayer, from his office on the eighth floor of the U. G. I. building, Broad and Arch Streets, saw an acetylene gas cylinder on fire in a construction yard across Arch Street. The cylinder was closely surrounded by many other cylinders filled with oxygen and acetylene. All of the men in the

construction yard had hurried from the vicinity of the burning cylinder. Thayer ran across to the yard and, disregarding warnings, proceeded to move filled cylinders away from the burning cylinder. The danger of explosion was great since the burning acetylene gas was heating other oxygen cylinders (filled at 2,000 pounds pressure) and acetylene cylinders (filled at 350 pounds pressure), so that the gas in the cylinders was increasing in temperature rapidly and tending to expand. If one cylinder had ruptured the concussion probably would have exploded all other cylinders. When the fire department arrived the firemen wished to use water on the fire, but Thayer made the men use wet bags. This prevented the cylinders from rupturing owing to too rapid cooling of metal.

Howard T. Jayne, general main and service foreman, Philadelphia Gas Works. For assisting in the capture of four bandits who attempted to rob a messenger of the Olney Bank & Trust Company, Philadelphia, on May 4, 1926.

Charles J. McCready, caulker, Philadelphia Gas Works. For the capture of one of four bandits who attempted to rob a messenger of the Olney Bank & Trust Company, Philadelphia, on May 4, 1926.

Foster Corn, night foreman, Nashville Gas & Heating Company, Nashville, Tenn. For maintaining uninterrupted gas service to Nashville, by plunging through live steam to put spare boiler feed pump into action, when the active pump broke down.

G. L. Horner, erecting engineer, the U. G. I. Contracting Company, for exceptional effort, although badly burned, in maintaining uninterrupted gas service to Lebanon, Pa., and other localities, when a high pressure main caught fire on April 30, 1926.

William Lewis Brown, inspector, the Syracuse Lighting Co., Inc. (Certificate). For stopping the serious escape of gas in a burning building in Syracuse, N. Y., that endangered the lives of firemen.

* * *

C. OF C. DIRECTORS TO EXAMINE GAS REPORT

Kansas City.—The Chamber of Commerce board of directors will meet to examine the report of the industrial gas committee, it has been announced.

The report embodies a study of plans to bring industrial gas here from the Texas Panhandle.

It was compiled by W. L. Allen, president of the Sheffield Steel Corporation, chairman; H. R. Ennis, real estate operator; F. S. Dewey, vice-president of the Kansas City Power & Light Company, and H. A. Fitch, president of the Kansas City Structural Steel Company, and chairman of the general gas committee of the chamber.

Welding Society Announces Establishment of The Miller Medal

New York.—At the annual dinner of the American Welding Society held in New York on April 28, President F. M. Farmer announced the donation of an award, the gift of Samuel Wylie Miller, to be presented by the society annually in appreciation of work of outstanding merit in advancing the art and science of welding. The award is a gold medal, which will be known as the Miller Medal.

S. W. Miller has been one of the outstanding figures in the advancement of welding ever since its commercial inception. He is a past president of the American Welding Society and a prominent and active member of the Society of Mechanical Engineers, American Institute of Mining and Metallurgical Engineers and other scientific and engineering organizations. He has been long noted for his energetic insistence upon high quality and dependable workmanship and upon the development of welding by all processes along lines scientifically well founded. Mr. Miller is consulting engineer of the Union Carbide and Carbon Research Laboratories, Inc.

In establishing this award the details for the administration of which are not yet decided upon, Mr. Miller's object is to promote an appreciation of better welding and to encourage the study of those fundamentals which will lead to raising the quality of work done by the average operator.

* * *

New Higher Gas Rate in Effect in Harbor Area

Los Angeles, Cal.—A general raise in gas rates was in effect in the harbor district following the conclusion of a hearing before the State Railroad Commission on the Southern Counties Gas Company's application for an increase.

The company is permitted to raise its top rate from 85 cents to 98 cents, and its other rates in proportion, in San Pedro, Wilmington and Seal Beach, and other harbor areas exclusive of Long Beach.

Gain in Natural Gas Rates Not to Apply in Pomona

Pomono, Cal.—Pomona will not be affected by the increase in natural gas rates granted by the railroad commission to the Southern Counties Gas Company in its southern district, which includes San Pedro, Wilmington, Seal Beach, Pomona and adjacent territory, according to C. G. Spencer, district manager for the company here.

The new rates are 98 cents per thousand for the first 4,000 cubic feet, 85 cents per thousand for the next 11,000 cubic feet, 78 cents per thousand for the next 25,000 cubic feet and 72 cents for all gas over 40,000 cubic feet.

* * *

Great Lakes Utilities Corporation Acquires Seven Gas Plants

The Great Lakes Utilities Corporation (a Delaware corporation) has recently acquired seven gas plants serving the towns of Fulton, N. Y., Napoleon, Montpelier, Bryan, Wauseon, Archbold, Stryker, Pettisville and Delta, Ohio; Columbus and East Columbus, Ind.; Mt. Pleasant, Claire, Rosebush, Ludington and Greenville, Mich., and also a small natural gas system serving the towns of Killbuck, Millersburg and Clark, Ohio.

These communities have an aggregate population of approximately 67,500, of which 11,200 are consumers attached to the companies' lines. The seven gas plants are equipped for coal gas manufacture with water gas stand-by and peak load apparatus. The distribution is accomplished through an aggregate of 326 miles of high and low pressure mains.

The officers of the Great Lakes Utilities Corporation are:

R. H. Burdick, New York, president.

Charles F. Fundinger, of Philadelphia, vice-president.

Samuel H. Reynolds, Jr., of New York, secretary and treasurer.

Carroll Agnew, of Philadelphia, assistant secretary and assistant treasurer.

All matters of financing connected with this acquisition were handled by Messrs. Battles & Co. of New York and Philadelphia, and Taylor, Ewart & Co. of New York and Chicago.

Western Gas Construction Co. to Install High Pressure Line for Rochester Gas and Electric Corporation

The Western Gas Construction Company, Fort Wayne, Ind., has been awarded a contract by the Rochester Gas and Electric Corporation, Rochester, N. Y., to install a high pressure gas transmission trunk line from a point near their storage holder on the outskirts of Rochester to the village of Webster, N. Y., a distance of approximately 14 miles.

This line will be 6-inch diameter and all joints will be electrically welded. In addition to the main line they will also install two-inch distribution lines on the residential streets in the village of Webster. Services will be taken off the trunk line to supply residences along the right-of-way as well as in the village of Webster.

Work has already been started and it is planned to have the installation made complete early this summer.

* * *

Commission Approves New Schedule of Empire Gas & Fuel Co.

Albany. — The Public Service Commission has approved a new schedule of the Empire Gas & Fuel Co., Ltd., for gas service supplied in villages of Andover, Alfred, Alfred Station, Almond, Bolivar, Cuba, Greenwood, Hallsport, Richburg, Scio, Stanards, Wellsville and Whitesville and towns of Alfred, Alma, Almond, Andover, Bolivar, Clarksville, Cuba, Genesee, Greenwood, Independence, Scio, Wellsville, West Union, Willing and Wirt. Schedule effective April 1, 1927, under authority of order of the Commission dated April 28, 1927, in Case No. 3507, provides rate of 75 cents (reduction 5 cents) per thousand cubic feet for use of service for fuel, lighting and power. Minimum charge 75 cents (reduction 5 cents) per month. Discount for prompt payment, 5 cents per thousand cubic feet (5 cents on minimum bill), same as heretofore.

Franchise Granted to Ramapo Gas Corp.

Suffern, N. Y.—A franchise has been granted by the Village of Hillburn to the Ramapo Gas Corporation to install gas mains and services in said village. The work of installing mains and services along Wayne Avenue in the Village of Suffern is progressing very rapidly and this will materially increase the number of consumers and the consumption of gas. This work is being done under the supervision of John F. Barnard, president of the corporation, who is devoting his entire time to this project, only occasionally visiting his plant at Goshen, N. Y.

Mr. N. Lambert, Jr., of the Lambert Meter Co., Brooklyn, N. Y., gave an illustrated lecture to the students of the chemistry and physics classes of the Suffern High School. The meter used was the one that was on display in the office of the Ramapo Gas Corporation, and which was loaned to them by the Lambert Meter Co. This attracted a great deal of attention and the lecture at the school proved very instructive. It is planned that Mr. Barnard will demonstrate the process of coal gas manufacturing to the students.

* * *

Gas Co. Employes in Annual Frolic

Pueblo, Col.—Employes of both the plant and office of the Pueblo Gas & Fuel Co. celebrated the birthday of H. L. Doherty, president of the organization of which the local gas company is a part, in a picnic at City Park.

Arrangements had been made for the accommodation of some 125 employes. Features of the day included field and track events, novelty races, a horseshoe pitching contest and a game of indoor baseball between the plant nine and a team from the office.

Field events opened at 3 p. m. and extended over the greater part of the afternoon. A picnic dinner was served at sunset and the remainder of the evening was given over to dancing in the park pavilion.

Convention Calendar

May

31 & June 1—American Gas Association. Production Conference of Technical Section, Detroit, Mich.

June

16-17—Canadian Gas Association. Annual convention, King Edward Hotel, Toronto, Canada. G. W. Allen, secretary-treasurer, Toronto.

21-22—Empire State Gas and Electric Association. Annual meeting, Commercial Section, Elmira, N. Y.

July

5-7—Michigan Gas Association. Annual convention, Grand Hotel, Mackinac Island, Mich. Albert G. Schroeder, secretary-treasurer, Grand Rapids, Mich.

GAS MAIN FOR SPRINGS

Work Begins on Justice and Willow Springs Extension by the Public Service Company

La Grange, Ill.—Work preparatory to the laying of a gas main to extend from the present terminus at Bedford Park out through Justice and Willow Springs, nearly to Fairmont is now in progress. Much of the pipe is on the ground and welding has been under way for some days. The ditching will go at a rapid rate and gas will be available to residents of the villages named by early summer. Frank Bouda, agent for this district for the Public Service Company, with office at 5520 Archer Avenue, Summit, is to canvass the district for gas users in the next few days.—Des Plaines Valley News.

* * *

City's Gas Contract Extended Two Months

Lowell, Mass.—With the stipulation that the new contract shall be retroactive to May 17, the present contract between the City of Lowell and the Lowell Gas Light Co. has been extended over a period of two months from that date. The street lighting contract expired April 1.

INCOME FROM GAS SALES SHOWS INCREASE

Report of Public Utilities Director Lists Important Savings Resulting from Economies. Many Improvements During Year

Richmond, Va.—The output of city gas last year was less than that of the previous year, although the sales were greater. This is the rather paradoxical statement made by George H. Whitfield, director of public utilities, in his annual report, just issued. Director Whitfield clarifies this statement, however, in explaining that the condition exists because his department has caused a reduction in the waste between the producing plants and the consumer.

The report states the waste was reduced by replacing many defective and ancient service pipes, and this reduction amounted to more than 60,000,000 cubic feet.

During the year, according to the report 66,394 feet of gas mains were installed, and 1,440 gas services were added to the system.

* * *

PLENTY OF GAS ASSURED

New Pipe Line Being Constructed From the Texas Fields

Topeka.—Topeka will be assured of gas for heating and lighting for the next twenty years, George J. Swan, manager of the Capital Gas and Electric Company, said. Contracts for pipe for a new twenty-inch pipe line from the Amarillo, Texas, gas fields have been let in Pittsburgh, Pa., Swan said, with an understanding that the construction of the new pipe line is to begin in June. It must be completed by November.

The exact route to be followed by the line has not yet been determined. It is possible there will be a hook-up with the present company line at Wichita, and it is possible the new line will be cut into the Kansas City line. Surveys are not finished, Swan declared, and until they are it cannot be definitely said just which route the pipe line will take.

New Appointees to Indiana Public Service Commission Assume Position

Indianapolis, Ind.—The three new appointees to the Indiana Public Service Commission, which regulates all public utilities in Indiana, including gas, electric light, bus, interurban companies operating in the state, took their positions May 1. The appointment of Calvin F. McIntosh, of Worthington, and Harvey Harmon, Princeton, to be the Democratic members to succeed Frank Wampler and Clyde H. Jones respectively, and the reappointment of Howell Ellis, Indianapolis, Republican, were announced by Governor Ed. Jackson after several days of consideration of the various applicants for the vacancies.

Mr. McIntosh is a member of the Federal Board of Vocational Education. He has known the governor for many years. Mr. Harmon secured his appointment through the resignation of Mr. Jones, and his term will expire May 1, 1929. Mr. Ellis was appointed to the commission in December of last year to fill a vacancy caused by resignation, and his term, as that of Mr. McIntosh, is for four years. Mr. Ellis had served as secretary of the commission for about eighteen months before his appointment to the body. He was a newspaper reporter before that and had the statehouse run for one of the Indianapolis papers.

Mr. Wampler had written the governor before the expiration of his term, stating that under no circumstances would he be a candidate for reappointment. Before his term he was Indiana manager for the Indiana Bell Telephone Company. Mr. Jones announced several months ago that he would resign this spring in order to resume the practice of law.

The selection of Mr. McIntosh as a member of the commission was a surprise to many who were in touch with the situation, as his name had not been mentioned. It is understood he was sought out by the Governor and the place offered to him. He will resign his place on the Federal Vocational Board at once.

GAS MAINS EXTENDED FOR MILES

Laid Along Freemansburg Highway Preparatory to Reconstruction of That Road

Easton, Pa.—The decision by the state and county authorities to make a concrete highway of the Freemansburg road has led to activities by the Easton Gas Company. Pipes have been laid far out beyond the Wilson borough line.

The gas company has completed its line on the Freemansburg road to a point beyond Bethlehem township line. This line of pipe is 10,640 feet in length—over two miles, from Twenty-fifth Street, Wilson borough. The company had run a line 1,500 feet north along the road from the William Penn Highway to what is known as Stone's Crossing and 700 feet south of the crossing. It has run several other shorter lines north and south, and will lay another line to Highland Park.

* * *

Central States Gas Company Rewards Employee

Vincennes, Ind.—William A. Tobias, manager of the Central States Gas Company, of Vincennes, Ind., is in receipt of two letters, one from the president and the other from the vice-president of the Central Public Service Company, each commending him for his success in the recent gas competitive campaign held through November and December last year. In addition to the letters came two prizes, one a 19-jeweled watch from the president and another a check for $75 from the vice-president. The cash prize Mr. Tobias divided among the employees of the company assisting him in making the sales

Imported Gas Is Now Being Served

Niagara Falls, N. Y.—The local gas generating plant of the Niagara Falls Gas and Electric Light Company, at the foot of Niagara Street, discontinued operation and the new gas main from the Semet-Solvay plant, on the River road, Tonawanda, was connected with the local distributing mains.

The Semet-Solvay Company will furnish all gas distributed locally by this company in the future, and a new rate scale, recently approved by the Public Service Commission, went into effect recently. This gas is piped from the Solvay plant to this city by means of an eight-inch main which was recently completed.

* * *

Ask for Special Rate to Dispose of Surplus Gas

Richmond, Ind.—Authority to establish a special rate schedule and provide gas for commercial and domestic purposes at Richmond, Ind., are asked of the Indiana Public Service Commission in a petition by the Indiana Gas Utilities Company. The company, organized about a year ago, took the management of the Richmond, Brazil and Terre Haute gas companies and made a reduction in the domestic rates at Richmond. The petition explains that with changes in management the entire output of the present Richmond plant is not used and the sale of gas for some purposes under a special schedule is asked.

* * *

To Build Gas Line

Elizabeth, N. J.—A "booster line," calculated to increase the gas pressure in sections of Union County, is being constructed in Westfield by the Elizabethtown Consolidated Gas Company. Starting at the holder the line will pass through to the Galloping Hill road. The side streets leading from the main route will thus receive a higher pressure of gas. Sixteen-inch mains are being laid. The contract has been awarded to E. L. Grassman & Co. of Elizabeth.